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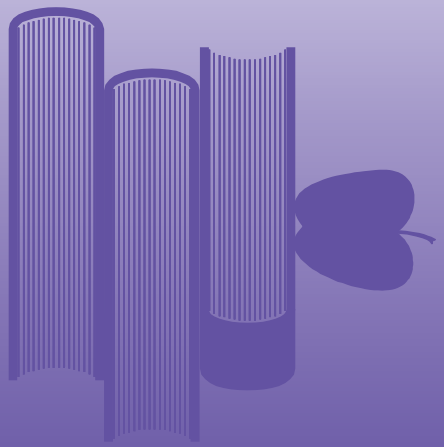
New York State Department of Health
Diabetes In Children — A Resource Guide For Families of Children with Diabetes



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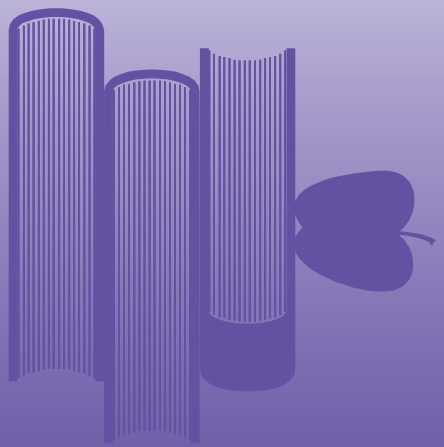


Overview of the Governor's Initiative

Overview of the Governor's Initiative

Since 1996, Governor Pataki has spearheaded initiatives to address the needs of people with diabetes. In his 1999 State of the State Address the Governor proposed this Initiative for Children with Diabetes. The Diabetes Control Program convened a workgroup to act on this proposal.

Priorities:

- development of tools
- expansion of educational efforts to assist children with diabetes and their families

Goals:

- demonstrate positive changes in behavior
- improve health outcomes
- increase opportunities for self-management
- help children with diabetes fully participate in mainstream activities.

Workgroup:

- members include public, medical, educational and governmental sectors
- charge of the workgroup is to
  - identify existing resources
  - modify them to New York specific information
  - develop a resource manual of information and tools.

Diabetes background:

- diabetes requires a unique, complex and inseparable blend of self and medical care
- controlling blood glucose levels has been shown to reduce the likelihood of unwanted complications
- early diagnosis and control of glucose and cardiovascular risks are important and proven elements in the prevention of diabetic complications.

Diabetes in New York State:

- one in twelve New Yorkers has diabetes, but about one half are undiagnosed
- direct and indirect costs of diabetes in our state exceed $8.7 billion annually
- more than 12,000 of our school-age children were estimated to have a diagnosis of diabetes
- hospitalization costs for these 12,000 children were $12,551,470 in 1996 (averaging $6645 per child).

Diabetes in children:

- majority of children with diabetes are diagnosed with Type 1 diabetes
- however, literature reports an alarming growth in the diagnosis of Type 2 diabetes in adolescents, attributed in part to the high number of obese and overweight school-age children and sedentary lifestyles
- New York State Diabetes Centers of Excellence report between 10% and 20% of newly diagnosed school age children have Type 2 Diabetes (formerly called "non-insulin dependent diabetes").

Care of Children with Diabetes in School Settings

- **American Diabetes Association Position on Care of Children with Diabetes in School/Day Care Settings**
- **American Diabetes Association Recommendations for Diabetes Classification, Testing, and Diagnosis**

Care of Children with Diabetes in the School and Day Care Settings

American Diabetes Association – Position Statement, Abridged

(For Full Statement – See appendix)

Diabetes is one of the most common chronic diseases of childhood, with an incidence of approximately 1.7 affected individuals per 1000 people aged younger than 20 years. In the U.S., approximately 13,000 new cases are diagnosed annually in children. About 125,000 individuals younger than 19 years of age have diabetes in the U.S.A majority of these children attend school and/or some type of day care and need knowledgeable staff to provide a safe school environment. Both parents and the health care team must work together to ensure school systems and day care providers have the information and training they need to allow children with diabetes to participate fully and safely in school.

Federal laws that protect children with diabetes include the Rehabilitation Act of 1973, Section 504, the Individuals with Disabilities Education Act of 1991, and the Americans with Disabilities Act of 1992. Under these laws, diabetes has been determined to be a disability, and it is illegal for schools and/or day care centers to discriminate against children with diabetes. Any school that receives federal funding or any facility considered open to the public must reasonably accommodate the special needs of children with diabetes. The required accommodations should be provided within the child's usual school setting with as little disruptions to the school's and the child's routine as possible and allowing the child full participation in all school activities. Federal law requires an individualized assessment of any child with diabetes.

Despite these protections, children in the schools and day care setting still face discrimination. For example, some day care centers have refused admission to children with diabetes. Children in those classrooms have not been provided the assistance necessary to monitor blood glucose and/or have been prohibited from eating needed snacks. Appropriate diabetes care in the school and day care setting is necessary for the immediate safety of the child and for the child's long-term well being and optimal academic performance.

School and day care personnel must have an understanding of diabetes and its management to facilitate the appropriate care of the child with diabetes. Knowledgeable personnel are essential if the child is to achieve the good metabolic control required to decrease risks for later development of diabetes complications. Studies have shown that the majority of school personnel have an inadequate understanding of diabetes and the parents of children with diabetes lack confidence in their teachers' ability to manage diabetes effectively. Consequently, diabetes education needs to be targeted at day care providers, teachers, and other school personnel who interact with the child, including school administrators, school coaches, school nurses, health aides, bus drivers, secretaries, etc.

American Diabetes Association Recommendations for Diabetes Classification, Testing and Diagnosis *(revised, 1997)*

Name Changes

Type 1 – Formerly (IDDM) – insulin dependent diabetes mellitus

Type 2 – Formerly (NIDDM) – non-insulin dependent diabetes mellitus

Simplified Testing and Diagnosis

Diabetes can be diagnosed in any one of three ways, confirmation should be completed on a different day using one of the other tests listed below:

1. A Fasting Plasma Glucose (FPG) of ≥ 126 mg/dl (after no caloric intake for at least eight hours)*
2. A casual plasma glucose (taken at any time of day without regard to time of last meal) ≥200 mg/dl with the classic diabetes symptoms of increased urination, increased thirst and unexplained weight loss.
3. An oral glucose tolerance test (OGTT) value of ≥ 200 mg/dl in the two hour sample.

* *Preferred test: ease of administration*
convenience
acceptability to patient
lower cost

Diabetes — General Information

- **Diabetes Overview**
  - Symptoms
  - Types
- **Nutrition**
- **Physical Activity**
- **Blood Sugar Monitoring**
- **Hypoglycemia (Low Blood Sugar)**
  - What is Glucagon?
- **Hyperglycemia (High Blood Sugar) and Monitoring For Presence of Ketones**
  - Urine Testing For Ketones
- **Insulin and Insulin Delivery Systems**
  - Insulin
  - Insulin and Insulin Delivery Systems (syringes,pens, pumps)
  - Disposing of Sharps Safely (syringes, lancets)
- **Helping Others Take Care of the Child with Diabetes**
- **Diabetes Identification Card**
- **Diabetes Care Information For You**

Diabetes — Overview

Diabetes is a disorder of metabolism — the way in which your body converts the food you eat into energy. Most of the food you eat is broken down by digestive juices into the fuel you need to survive including a sugar called glucose. Glucose is the body's main source of energy. After digestion, glucose passes into your bloodstream, where it is available for cells to take in and use or store for later use.

In order for your cells to take in glucose, a hormone called insulin must be present in your blood. Insulin acts as a "key" that unlocks "doors" on cell surfaces to allow glucose to enter the cells. Insulin is produced by special cells (islet cells) in an organ called the pancreas, which is about 6 inches long and lies behind your stomach.

In people, who do not have diabetes, the pancreas automatically produces the right amount of insulin to enable glucose to enter cells. In people who have diabetes, cells do not respond to the effects of the insulin that the pancreas produces. If glucose cannot get inside cells, it builds up in the bloodstream. The buildup of glucose in the blood — sometimes referred to as **high blood sugar** or hyperglycemia (which means "too much glucose in the blood")—is the hallmark of diabetes.

When the glucose level in your blood goes above a certain level, the excess glucose flows out from the kidneys (two organs that filter wastes from the bloodstream) into the urine. The glucose takes water with it, which causes frequent urination and extreme thirst. These two conditions — frequent urination and unusual thirst — are usually the first noticeable signs of diabetes. Weight loss often follows, resulting from the loss of calories and water in urine. A summary of common symptoms of diabetes and factors that can affect blood sugar levels in people with diabetes follows.

Symptoms of High Blood Sugar that Characterize Diabetes

- frequent urination (including during the night)
- unusual thirst
- extreme hunger/weakness
- unexplained weight loss
- extreme fatigue
- blurred vision
- irritability
- itchy skin
- slow healing of cuts and bruises
- frequent infections of skin/gums/vagina/bladder
- tingling/numbing in legs, feet, hands

Types of Diabetes

Diabetes occurs in several different forms. This manual will focus **primarily** on issues related to type 1 diabetes in children. For information on type 2 diabetes in children and gestational diabetes see section entitled "Other Types of Diabetes."

Type 1 Diabetes

Type 1 diabetes usually has a very rapid onset. It was previously called Juvenile Diabetes because most people develop it as children or teenagers. This type of diabetes occurs when the cells in the pancreas that make insulin are mistakenly damaged by the body's own immune defense system. The underlying cause for this damage has not been identified yet, although research is currently underway. To date, insulin injection is necessary for survival. The only treatment is to control food intake, activity levels and insulin. Approximately 5-10% of all people with diabetes have type 1 diabetes, but the majority of children with diabetes have type 1. This translates to approximately 1 student per 400.

There is no single way to treat type 1 diabetes. Each child's life events vary and as such, experienced diabetes teams are necessary to set up individualized treatment plans. For treatment plans to be most successful, an insulin regimen will be tailored to the needs of the child, as will a meal plan and recommendations for physical activity. New information on diabetes management allows people with diabetes to be more liberal with food planning.

Children with diabetes must be allowed to participate fully in all school activities. They need the cooperation and support of school staff members to help them with their treatment plan.

Blood sugar monitoring is essential to help assess how well the treatment plan is working. Most children can perform blood sugar checks by themselves but may need a private place to do so. Some children may need supervision to see that the procedure is done properly and results are recorded accurately. It is helpful for the child to have a meter at school so the blood can be checked when needed. How often the child checks or whether he/she checks at school at all are decisions made in conjunction with the child, family, child's diabetes team and school personnel.

It is the board of education's responsibility to ensure that staff, including nursing staff has adequate training and updated skills in order to assist children with diabetes. The school nurse is responsible to recognize when additional training is needed to perform a particular procedure and to help determine where the appropriate training can be obtained.

Type 2 Diabetes

Type 2 diabetes is the most common form of the disease, representing 90-95% of people with diabetes. It was previously known as adult-onset or non-insulin dependent diabetes because it most often occurs after age 40. However, a recent trend has emerged in which type 2 diabetes is being diagnosed in children, adolescents and young adults. Currently, studies are underway to better define the populations at highest risk for this form of diabetes, so that preventive measures may be taken and appropriate behavioral and medical therapies may be developed.

The Path Toward Type 2 Diabetes

In adults, one of the greatest risk factors for type 2 diabetes is excess weight. The same is likely true for children with diabetes. As an individual gains weight, the extra weight causes the cells of the body to become resistant to the effects of insulin. The pancreas responds by producing more and more insulin, which eventually begins to build up in the blood. High levels of insulin in the blood, a condition called insulin resistance, may cause problems such as high blood pressure and harmful changes in the levels of different fats (cholesterol) in the blood. Insulin resistance, is the first step on the path to type 2 diabetes.

The second step to type 2 diabetes is a condition called impaired glucose tolerance. Impaired glucose tolerance occurs when the pancreas becomes exhausted and can no longer produce enough insulin to move glucose out of the bloodstream into cells. Glucose begins to build up in the blood. If it is not diagnosed and not treated, this gradual rise in glucose often leads to type 2 diabetes, high blood pressure, and heart disease—in any order and in any combination.

While all these harmful activities are going on inside the body, the affected individual may feel perfectly fine. Type 2 diabetes is considered a silent disease because it works its destruction over many years without causing any noticeable symptoms. That's why half of the people who have type 2 diabetes don't know it. You or someone you love could have diabetes.

Are you at risk?

Currently there is not enough information on children with type 2 diabetes to define risk factors. This disease does seem to appear most often in overweight, sedentary children of certain racial/ethnic groups (e.g. Native American, Hispanic, and African American). More research is needed to better identify high-risk individuals.

Risk Factors for Type 2 Diabetes in Adults:

- Age >45
- 1 or more parents with diabetes
- Member of at-risk ethnic group
- Gestational diabetes w/birth of child >9 lbs.
- Obesity
- Hypertension
- High triglyceride levels
- Low levels of High Density Lipoproteins

Preventing and Managing Type 2 Diabetes

The best way to help prevent and manage Type 2 diabetes is to adopt and follow a healthy lifestyle, which is recommended for everyone.

Components of Healthy Living for Type 2 Diabetes Management and Prevention

- Well-balanced diet
- Weight management
- Regular physical activity
- Blood glucose monitoring and management
- Medications, if prescribed
- Avoidance of tobacco use
- Stress Management
- Moderate (in adults) or no alcohol consumption

Gestational Diabetes Mellitus (GDM)

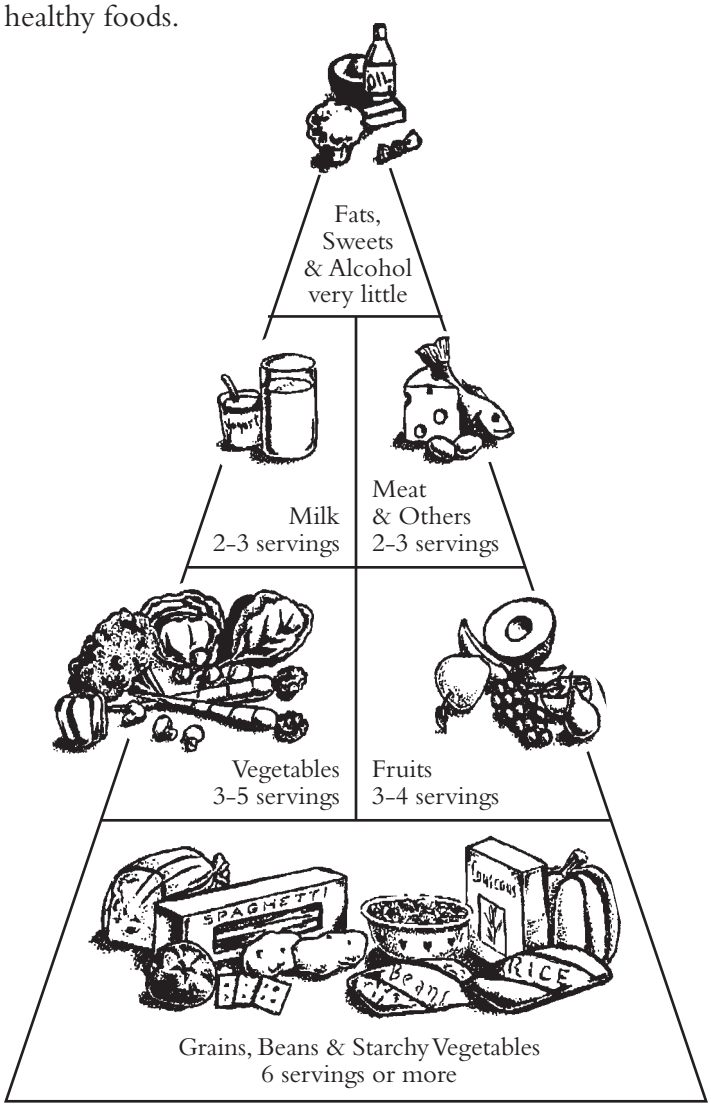
GDM is a type of diabetes mellitus that can occur when a woman is pregnant. In the second half of pregnancy, the woman may have glucose (sugar) in the blood at a higher than normal level. However, when the pregnancy ends, the blood glucose levels return to normal in about 95 percent of all cases. Women who have gestational diabetes should work closely with their health care team to learn how to monitor their blood sugars, meal planning and activity levels in order to control blood sugars.

Nutrition

Nutrition is one of the cornerstone treatments of diabetes. The goals of nutrition therapy include an adequate caloric and nutritional intake for growth and development and the balance of food with insulin and activity to achieve appropriate blood glucose levels.

Children with diabetes have the same nutritional needs as a child without diabetes. A meal plan needs to be developed to meet the individual needs of the child, taking into consideration food preferences, cultural influences, family eating patterns and schedules, weight, activity level, and insulin action peaks. Family members can benefit from these healthy eating guidelines.

The Food Guide Pyramid is a guide for choosing healthy foods.



There are 3 major nutrients found in the food groups identified on the Food Guide Pyramid. A summary of these nutrients (protein, carbohydrate and fat), their roles in the body, the food groups that contain them, and their impact on blood sugar follows.

Protein builds and repairs body tissues. Protein is important for normal growth and development. Eaten by itself, protein has little effect on blood sugar. As part of a mixed meal, protein may slow the absorption of carbohydrate, causing blood sugar to rise more gradually.

Over the years, many popular body building and weight loss regimens have over-emphasized the role protein plays in a healthy, well-balanced meal plan. It is not uncommon for individuals to turn to protein supplements in the form of powders, shakes, etc. to boost their protein intake. It is important to note that protein needs for even vigorous athletes can be easily met with everyday food sources. For people with diabetes, it is especially important to communicate with their physicians if they are considering a protein supplement or any other nutritional supplement, due to the potential impact they may have on blood sugar levels.

Food Group Sources of Protein:

- **Meat and Others**
- **Milk**

Fats carry the flavor of our foods, and are a very concentrated source of energy for the body. They also slow the emptying time of the stomach after a meal. Eaten alone, fats have very little effect on blood sugar. As part of a mixed meal, fats may slow the absorption of carbohydrate, causing a more gradual rise in blood sugar.

Food Group Sources of Fats:

- **Meat and Others**
- **Fats**
- **Sweets**

Carbohydrates provide most of the energy we need to move, work and live. As such, the majority of calories consumed should come from carbohydrate sources, spaced appropriately throughout the day. Of all the food components, carbohydrates have the greatest effect on blood sugar. *The total amount of carbohydrate consumed has more of an effect on blood sugar than the type of carbohydrate.*

Food Group Sources of Carbohydrates:

- **Starch/Grain**
- **Fruit**
- **Milk**
- **Sweets**

Meal planning for diabetes includes all the principles of good nutrition that are recommended for good health. People with diabetes are encouraged to choose a well-balanced diet with a controlled amount of carbohydrate at each meal and snack in order to help manage blood sugar.

Healthy carbohydrates from starches, fruits and milk are encouraged daily. Sweets can be worked into a meal plan occasionally, as long as the carbohydrates they contain are accounted for, keeping in mind they are often sources of empty calories. This is true for any child or adult with or without diabetes.

Carbohydrate information can be obtained from many sources, including the Food Guide Pyramid, food labels, and any number of books that contain nutrient information of specific foods.

Individualizing Meal Plans for Children with Diabetes

It is recommended that children see a Registered Dietitian, who is preferably a Certified Diabetes Educator, once a year for an individualized meal plan. The meal plan should include 3 meals and 2-3 snacks with a specific amount of carbohydrate. The meals and snacks should be timed appropriately with the peak of the child's insulin. Each child needs a certain amount of carbohydrate based on age, size, gender and activity level.

General Guidelines for Daily Carbohydrate Intake**

Age	Daily Carbohydrate Needs	Per Meal	Per Snack
5-10 years	Male and Female: 200-275 grams	50-70	15-20
11-15 years	Male: 275-400 Female: 275-300	70-90	30-45
16-18 years	Male: 300-475 Female: 250-300	75-100	30-50

** *This is a generalization; children who have seen a Registered Dietitian may have a meal plan individualized for them based on age, gender, activity level, etc.*

Knowing the carbohydrate content of given foods allows for more flexibility in the meal plan. One serving from starch/grain, fruit, milk or sweets group contains 15 grams of carbohydrate. The following chart illustrates examples of foods that contain approximately 15 grams of carbohydrate.

15 Gram Carbohydrate Snack Choices

Choose More Often	Choose Less Often
1 cup low fat milk	1 mini bag potato chips
1 (4 ounce) juice box	1 small cupcake
1 (4 ounce) jar canned fruit	2 small cookies
1 piece fresh fruit	½ cup ice cream
8 animal crackers	1 snack pack pudding
1-1½ whole graham crackers	1- 2 inch square birthday cake
1 mini bag pretzels	
4 peanut butter or cheese crackers	

Food Labels

Another method of determining how a food may fit into your daily meal plan is through the nutrition information found on food labels. Food labels can help you figure out the appropriate portion size to provide the amount of carbohydrate needed at any given meal or

snack. Use the food label for pretzel nuggets along with the following instructions to learn how to determine appropriate portion sizes based on carbohydrate needs.

Look at serving size: 12 pretzel nuggets

Look at Total Carbohydrate: 23 grams

The sugars listed are included in the Total Carbohydrate amount and therefore should not be added to the total carbohydrate amount.

To figure out how much carbohydrate is in each pretzel nugget:

Total carbohydrate divided by serving size

23g carbohydrate divided by 12 nuggets = 1.91 g/nugget

Therefore there is 1.9 grams of carbohydrate in each pretzel nugget

Next you can figure out how many pretzel nuggets are equal to 15 grams or 30 grams of carbohydrate.

For 15 grams carbohydrate:

15 grams divided by 1.9 = approximately 8 pretzel nuggets contain 15 grams carbohydrate

For 30 grams carbohydrate:

30 grams divided by 1.9 = approximately 16 pretzel nuggets contain 30 grams carbohydrate

Diet Exchanges**: 1.5 Starch

**Based on the Exchange Lists for Meal Planning.

Nutrition Facts

Serving Size 1 oz (28 g/about 12 nuggets)
Servings Per Container: 18

Amount Per Serving	
Calories 100	**Calories from Fat** 0
	% Daily Value
Total Fat 0 g	0%
Saturated Fat 0 g	0%
Cholesterol 0 mg	0%
Sodium 420 mg	17%
Total Carbohydrate 23 g	8%
Dietary Fiber 1 g	4%
Sugars 1 g	
Protein 3 g	

Vitamin A 0% Vitamin C 0%
Calcium 0% Iron 6%

Percent Daily Values are based on a 2,000-calorie diet. Your daily values may be higher or lower depending on your calorie needs.

	Calories	2,000	2,500
Total Fat	Less than	65 g	80 g
Sat Fat	Less than	20 g	25 g
Cholesterol	Less than	300 mg	300 mg
Sodium	Less than	2400 mg	2400 mg
Total Carbohydrate		300 g	375 g
Dietary Fiber		25 g	30 g

Calories per gram:
Fat 9 •Carbohydrate 4 • Protein 4

Special Nutrition Issues

School Parties:

Sweets can be eaten on a special occasion such as a birthday party or Halloween party. The carbohydrates should be included as part of the child's meal plan. See snack list for serving sizes equal to 15 grams of carbohydrate.

Field Trips:

Children should carry convenient snacks on the bus and field trip. Bus drivers and chaperones should be notified that the child has diabetes and may need to eat a snack on the bus or during the trip.

After Care:

Children should have a convenient snack if staying after school. Notify school personnel that the child may need to eat during the session.

School Lunch:

Children with diabetes may participate in the school lunch program. Families can review the school menu ahead of time and modify as needed. Families may also wish to contact the school food service director if needed.

Physical Activity

Physical activity is an important part of the overall management of diabetes. The benefits of physical activity include cardiovascular fitness, long term weight control, social interaction and the promotion of self-esteem fostered by team play. Additionally, physical activity can help to lower blood sugar.

Physical activity is a fundamental part of a healthy lifestyle for all children including children with diabetes. Children with diabetes can participate in gym class and after school sports. Health care providers may suggest adjustments in medication and food for appropriate blood glucose control. Families are encouraged to include more physical activity at home. The physical activity pyramid is a guide for increasing activity in your life. (See pages 24 and 25).

General Physical Activity Guidelines:

1. Drink lots of sugar free fluids, especially water
2. Have rapid acting carbohydrate sources available
3. Test blood sugar before, during and after physical activity
4. Wear diabetes ID
5. To avoid low blood sugar – eat more carbohydrate or talk with your health care provider about reducing the amount of insulin prior to physical activity.

Carbohydrate Replacement for Physical Activity

The blood sugar should be checked according to the physician's plan so that proper measures can be taken to keep the level in the appropriate range. The following chart illustrates the action that should be taken to maintain blood sugar safely with physical activity.

Type of Activity	If Blood Sugar Prior to Activity is:	Then eat the following carbohydrate before activity:
Short Duration Less than 30 minutes	Less than 100	15 grams carbohydrate
	Greater than 100	no carbohydrate necessary
Moderate Duration 1 hour	Less than 100	25-50 grams carbohydrate plus protein source
	100-180	15 grams carbohydrate
	180-240	no carbohydrate necessary
Strenuous 1-2 hours	Less than 100	50 grams carbohydrate plus protein source
	100-180	25-50 grams carbohydrate plus protein source
	180-240	15 grams carbohydrate

If blood sugar is greater than 240, check for presence of ketones in the urine. For more details on ketones, see section entitled Hyperglycemia and Monitoring for Presence of Ketones.

According to the most recent position statement from the American Diabetes Association (Diabetes Care, Volume 24, Supplement 1, January 2001) regarding exercise and control of blood sugars, the following guidelines should be adopted.

- Avoid exercise if fasting glucose levels are >250 mg/dl and ketosis is present, and use caution if glucose levels are >300 and no ketosis is present.
- Ingest added carbohydrate if glucose levels are <100 mg/dl.

Kid's Physical Activity Schedule

Sunday

Monday

Tuesday

Wednesday

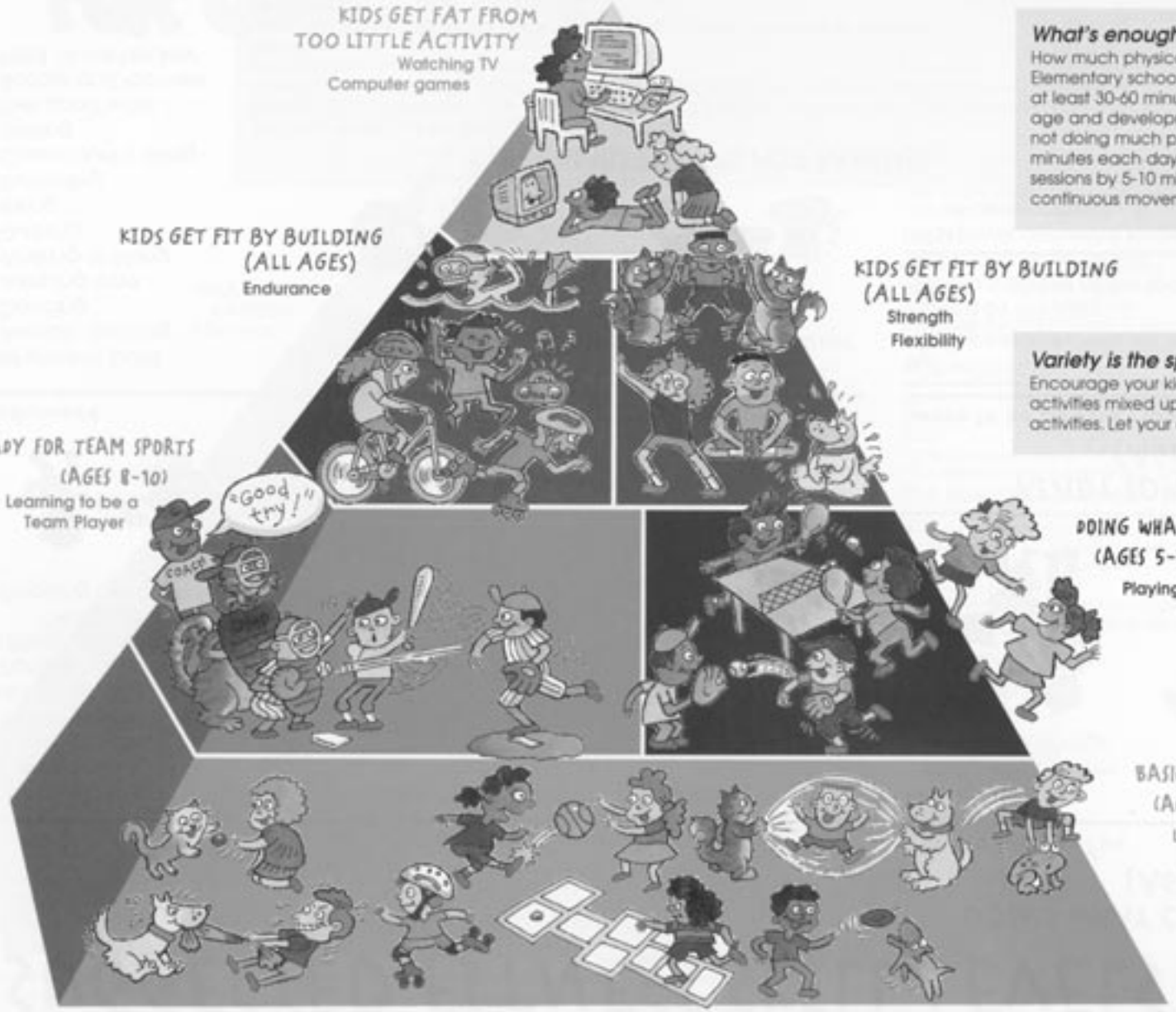
Thursday

Friday

Saturday

HOT FIT FACTS FOR COOL KIDS

from NCES®



What's enough?

How much physical activity does your child need? Elementary school age children need to accumulate at least 30-60 minutes all or most days of the week—age and developmentally appropriate. If your kid is not doing much physical activity, begin with a few minutes each day of active play. Gradually increase sessions by 5-10 minutes. Work up to 15-20 minutes of continuous movement without stopping.

Variety is the spice of an active life.

Encourage your kid to engage in endurance type activities mixed up with strength and flexibility building activities. Let your child pick the activities he/she enjoys.

Snack Choices for Physical activity

15 grams carbohydrate:

1 – 4ounce juice box
1 cup Gatorade
1 sliced orange or apple
1 small box raisins
6 saltines
1 cup light yogurt
¾ cup dry cereal

30 grams carbohydrate:

1 cereal bar
1 – 8 ounce juice box
2 slices bread
1 small bagel

45-50 grams carbohydrate plus protein:

1 sports nutrition bar
1 Package (6) cheese or peanut butter sandwich crackers plus 4 oz. juice

Protein Sources:

Peanut butter
Sliced or String Cheese
Lunch Meat
Egg
Peanuts, Walnuts or Almonds

Physical Activity Special Issues:

A low blood sugar can occur long after a physical activity session.

Treatment:

1) Test blood sugar after physical activity, before bedtime and even during the night
2) Ensure that a substantial snack is eaten before bedtime, which includes carbohydrate and protein.

Blood Sugar Monitoring

Blood sugar monitoring is a necessary and useful tool in the management of diabetes. Monitoring helps looks for patterns of blood sugar values as well as helping to detect acute problems of high or low blood sugar.

Persons on an intensive management plan monitor their blood sugar every time they eat a meal to help them decide how much insulin to take at that time. The school nurse can play an integral role in assisting children with diabetes in their tasks of daily management away from home.

There are numerous brands of monitors available, each with specific features that an individual may find useful. The school nurse needs to become familiar with the various monitors being used. In New York State, most insurance companies cover the cost of monitors for people with diabetes, regardless of the type of medicine that is used to treat the diabetes. Depending on the knowledge and skills of the child with diabetes, the school nurse may also take an active role in assisting the child with diabetes monitor his or her blood sugar at school.

What level should a blood sugar be?

For a person who does not have diabetes, a normal blood sugar level is 70-120 mg/dl. Blood sugar levels in a child with diabetes will vary depending on insulin action times, food consumed, and activity level.

The diabetes health care professional will advise the child's family on an appropriate "target range" that the blood sugar level should fall within **most** of the time, and the necessary action to take when out of this range. They will also give recommendations about how often the tests should be taken.

Some helpful suggestions:

- The finger should be clean and dry before being pricked.
- Apply an adequate amount of blood to the test strip.
- Allow child to assist in the steps in the monitoring procedure. How much involvement will depend upon the age of the child and their personality. Even small children can help with some of the steps such as choosing the finger or getting the strip out of the container.
- Don't get in the habit of calling blood sugar results "good" or "bad". Values are either "within range" or "out of range" which can be called "high" or "low". Try to use a non-judgmental approach when a result is abnormal.
- If the blood sugar reading is unusually high or unusually low, repeat the test. Then, treat for hyperglycemia or hypoglycemia following the second test result.

Criteria for Determining Appropriateness of Self-Testing Blood Sugar at School

- The student demonstrates accurate finger-stick technique (see above).
- The student uses appropriate infection control practices consistently.
- The student disposes of sharps appropriately.
- The student is able to interpret blood sugar results and seek appropriate treatment if necessary.

Hypoglycemia

Hypoglycemia: Low Blood Sugar (Insulin Reaction)

Warning signs and symptoms of low blood sugar (insulin reaction) happen suddenly. Signs and symptoms can easily be mistaken for misbehavior. The child may not recognize symptoms developing. Severity of a low blood sugar reaction may progress from mild to severe.

Severe reactions are often preventable by early detection and treatment of low blood sugars. The school nurse can be instrumental in educating school personnel in the signs and symptoms of low blood sugar so that early treatment can be initiated to prevent progression to severe hypoglycemia. Blood sugar can go too low if the child with diabetes has:

- Taken too much insulin
- Not eaten enough food
- Had extra exercise without extra food or decrease in insulin

Mild Hypoglycemia-blood sugar between 50 and 70 mg/dl

Signs and Symptoms — A wide variety of symptoms and behaviors can occur

- Change in personality
- Acting quiet and withdrawn
- Being stubborn or restless
- Tantrums or sudden rage
- Confusion
- Inappropriate emotional responses (e.g.: laughter, crying)
- Poor concentration or day dreaming
- Shakiness
- Lack of response to verbal communication
- Sweatiness
- Headache
- Pallor
- Increased Heart Rate

If the child appears to be having signs or symptoms check blood sugar immediately. If the blood sugar level is unknown, go ahead and treat the symptoms.

Never send a child suspected of having a low blood sugar to the nurse's office alone. Send another student to get help if needed.

What To Do For A Child Who Is Showing Signs and Symptoms of Hypoglycemia

Optimally, check blood sugar before treating a child suspected of hypoglycemia, when in doubt — treat. To treat, give the child some quick-acting sugar (15 grams of carbohydrate), such as **one** of the following:

- ½ cup (4 oz.) of juice
- ¾ cup (6 oz.) of REGULAR (not diet) soda
- 3-4 glucose tablets
- 4-5 small jelly beans or gum drops
- 1 mini box of raisins
- 1 cup (8 oz.) sports drink
- 1 cup (8 oz.) low fat or skim milk

Check the blood sugar 15 minutes after treatment. If the blood sugar result is less than 70mg/dl, or if the child still has symptoms, repeat the quick sugar treatment and blood sugar testing cycle until the child is symptom-free and the blood sugar result is above 70mg/dl.

When the child feels better and the blood sugar result is above 70mg/dl, give one (1) of the following if the child's next meal is more than 1 hour away and/or if the child will be participating in active play/sports following this low blood sugar episode.

- 4 graham cracker squares with peanut butter or cheese,
- 6 saltine crackers with peanut butter or cheese,
- ***or*** the equivalent combination of carbohydrate (approximately 15 grams) and protein (approximately 1 oz.)

The child may return to class after the blood sugar is above 70 mg/dl and the child no longer has symptoms.

Moderate Hypoglycemia-blood sugar 40 mg/dl or less

Signs and Symptoms

- Staggering walk
- Pale appearance
- Uncontrollable crying episode
- Slurred speech
- Blank stare
- Refusal to take anything by mouth

Double the treatment amounts as indicated in the treatment for Mild Hypoglycemia. If the child has difficulty drinking but is able to swallow, (child may not be able to follow directions) place cake gel or glucose gel in between the child's cheek and gums. Administer the entire tube. Rub the cheek gently to make sure sugar is being absorbed. Follow with food if more than 30 minutes until next meal or snacks (see mild hypoglycemia).

The child may return to class after the blood sugar is above 70mg/dl and when the child no longer has symptoms.

Severe Hypoglycemia — This is a Medical Emergency!!! Call Emergency Medical Services (911)

Signs and Symptoms

- Unconscious
- Unresponsive
- Convulsion-like movement

The school nurse should be called immediately to assist the child while waiting for Emergency Medical Services to arrive. The school nurse should administer glucagon if it is needed. If the school nurse is not immediately available, another designated person who has been trained by the school nurse for emergency administration of glucagon may administer it.

Be sure child is lying down in a safe area protected from head and bodily injury. Position the child on his/her side. Direct someone to contact Emergency Medical Services (911) immediately. Inject glucagon per medical order. Do not attempt to put anything between the teeth. Do not leave the child unattended. As the child regains consciousness, nausea and vomiting may occur. Notify parents/guardians and /or diabetes team of the episode as soon as possible.

What is Glucagon?

Glucagon is a hormone that helps the liver release sugar into the blood. It is used to raise the blood sugar when a child is unable to take liquid or food by mouth because of unconsciousness, or seizure activity. Glucagon must be injected with a syringe into the skin, like insulin. Emergency Medical Services should be called anytime glucagon is needed.

What You Need

- 2 Glucagon Emergency Kits. You will need a prescription to purchase the kits at a pharmacy. It is recommended you have one for home and one for school.
- Use of glucagon should be part of a child's health care plan and be supplied to school by the family with accompanying physician order.

When Possible, Check a Blood Sugar Before and/or After Giving Glucagon. To Inject Glucagon:

- If two people are present: one should first call Emergency Medical Services (911) and then notify the parents, while the other prepares the glucagon. If only one person is present: first call 911, then administer the glucagon and then notify the parents.
- Glucagon is now available as recombinant DNA in a kit containing the glucagon powder in a vial and the diluent in a glucagon syringe
- Remove the seal from the bottle of glucagon in the kit (the small vial/bottle containing a white powder/pellet).
- Inject the liquid in the syringe into the bottle of glucagon
- Remove syringe from the bottle of glucagon, shake the bottle gently until the glucagon dissolves (looks clear)
- Draw-up the solution in the bottle with the correct size syringe based on the weight of the child.

- The glucagon syringe is marked with only 2 dosages 0.5 mg and 1.0 mg. The recommended dose of glucagon to inject is*:
  – 0.5 mg for a child 50 pounds or under
  – 1.0 mg for a child over 50 pounds
- Inject glucagon in the same manner as insulin injections.
- Keep the child lying on their side in case of vomiting.
- The blood sugar should rise at least 50-75 mg within 15-20 minutes
- Once the child is awake give a snack such as peanut butter and crackers or cheese and crackers.

Note: It is common for the child to vomit or feel nauseous after receiving glucagon.

Keep glucagon at room temperature in a central location in the home. Inform others caregivers of the location.

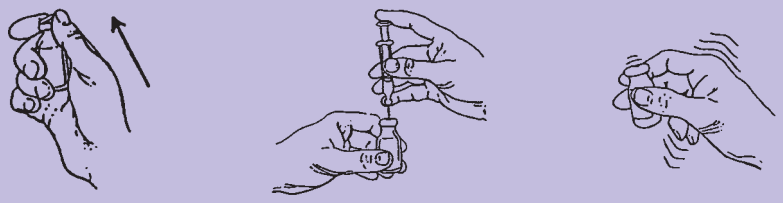
When possible, practice drawing up glucagon with an expired kit. Check the date of glucagon kits on a regular basis. Discard if past the expiration date. Obtain a refill immediately.

* *dosage recommendations from glucagon manufacturer*

TO PREPARE GLUCAGON FOR INJECTION

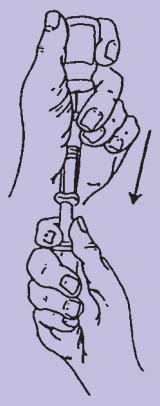
Note: Glucagon should not be prepared for injection until the emergency arises.

1. Remove the flip-off seal from the vial (bottle) of glucagon. Wipe rubber stopper on vial with alcohol swab.
2. Remove the needle protector from the syringe, and inject entire contents of the syringe into vial of glucagon.
3. Remove syringe. Shake vial gently until glucagon dissolves and the solution becomes clear.



GLUCAGON SHOULD NOT BE USED UNLESS THE SOLUTION IS CLEAR AND OF A WATER-LIKE CONSISTENCY.

TO ADMINISTER GLUCAGON



Use same technique as for injecting insulin

1. Using the same syringe, withdraw all of the solution from the vial.
2. Cleanse injection site on buttock, arm, or thigh with alcohol swab.
3. Insert the needle into the loose tissue under the cleansed injection site and inject the glucagon solution. Apply light pressure at the injection site and withdraw the needle.
4. If recommended by physician, give 1/2 of the mixed dose of glucagon to small children.

FEED THE PATIENT AS SOON AS HE/SHE AWAKENS AND IS ABLE TO SWALLOW.

CAUTION

1. Low blood glucose may cause convulsions.
2. When an unconscious patient awakens, he/she may vomit. To prevent the patient from choking on vomit, turn the patient on his/her side.

Hyperglycemia (high blood sugar) and monitoring for presence of ketones

Hyperglycemia- Blood glucose above 240 mg/dl

Signs and Symptoms:

- Loss of appetite
- Increased thirst
- Frequent urination
- Tiredness, sleepiness
- Inattentiveness
- Rapid breathing
- Fruity odor to the breath
- Nausea
- Vomiting

Possible causes:

- Not enough insulin
- Too much food
- Illness/Infection
- Stress

If the student has warning sings of hyperglycemia, check the blood sugar. If blood sugar becomes very high, the student may begin to utilize fat for energy, and produce a harmful by-product of fat metabolism called **ketones**. If the blood sugar level is higher than **240**, the student's urine should be checked for presence of ketones.

Urine Testing for Ketones

Ketones are a warning sign that the body is burning fat for fuel instead of sugar, and this could mean diabetes is out of control. Urine ketones should be monitored if the blood sugar is over 240 or if the child is ill.

Urine testing products are read by comparing the test color to a standard color chart. Factors such as handling the color pad with your hands as well as placing test materials on a counter recently cleaned with bleach can cause inaccurate results. Be sure to read the package insert for proper handling of the product.

Be aware of expiration dates. Once a bottle of strips is opened they are only good for a specified time. Check the label regarding how long they are good for after first opening. Ketone strips are available in individually foil wrapped packages. These strips will last until the expiration date. These may need to be requested from the pharmacy as a special order item if they are not routinely stocked.

Interpreting Urine Ketone Results

If Urine Ketones are:

Negative to small: give lots of fluids (sugar free such as water or diet soda pop). Recheck blood glucose and urine for ketones in several hours.

Moderate to large: call parent/diabetes team — rapid acting or short acting insulin may need to be given. Encourage fluids by mouth. Seek guidance from a physician if ketones are moderate or large.

If the blood sugar test result in school is over 240, or if the student has warning signs of high blood sugar, parent/guardians need to be made aware. This does not have to occur immediately unless the student is spilling moderate or large ketones. When ketones are moderate or large a serious medical condition called ketoacidosis may be developing. The parents should be advised immediately. If the child is vomiting and unable to take fluids by mouth, call 911 for transportation to the families preferred emergency room.

Never withhold food or make child perform extra exercise for high blood sugar episodes.

Insulin and Insulin Delivery Systems

Insulin

There are many different types of insulin, for different situations and lifestyles.

Characteristics

The three characteristics of insulin are:

Onset — The length of time before insulin reaches the bloodstream and begins lowering blood sugar.

Peak time —The time during which insulin is at its maximum strength in terms of lowering blood sugar levels.

Duration — How long the insulin continues to lower blood sugar

Storage

Opened vials can be stored at room temperature or in the refrigerator for 28 days. Unopened vials can be stored at room temperature for 28 days. Unopened vials can be stored in the refrigerator until the expiration date. Check the manufacturer's patient information insert for storage recommendations for insulin pens.

Expiration date

Make sure that all the insulin that is purchased will be used before its expiration date.

Types of Insulin by Comparative Action Curves

Action Time	*Insulin Type	Onset	Peak (hrs.)	Usual Effective Duration (hrs.)	Usual Maximum Duration (hrs.)
Rapid - Acting	Lispro (Humalog)	<15 minutes!	.5-1.5	2-4	4-6
Short-Acting	Regular	0.5-1 hr.	2-3	3-6	6-10
Intermediate Acting	NPH	2-4 hrs.	4-10	10-16	14-18
Intermediate Acting	Lente	3-4 hrs.	4-12	12-18	16-20
Long Acting	Ultralente	6-10 hrs.	None	18-20	20-24
Long Acting Basal	Lantus (Glargine)	Shortly after injection	None	24	24

** Pre-mixed insulin (a mixture of NPH and regular) is also available, but is generally **not** recommended for children.*

Insulin Delivery Systems

Syringes…pumps……pens …..they all do the same thing – deliver insulin. These items deliver insulin into the tissue so it can be used by the body. This category also includes injection aids – products designed to make giving an injection easier.

Syringes

Today's syringes are smaller and have finer needles and special coatings that work to make injecting as easy and painless as possible. When insulin injections are done properly, most people discover they are relatively painless.

Points to Consider for Optimal Insulin Delivery by Syringe

- The syringe being used should be the right size for the insulin dose.
- It should be easy to draw up and visualize the dosage (devices are available to make this task less complicated).
- Shorter, smaller needles are available which allow for ease of administration.

Insulin Pens

There is a wide range of insulin pen options available. The pens can be an excellent option when children need a single kind of insulin. They can make taking insulin much more convenient. Some children find the pen needles make injection more comfortable.

Pumps

Insulin pumps are computerized devices, about the size of a beeper or pager, which you can wear on your belt or in your pocket. They deliver a steady, measured dose of insulin through a cannula (a flexible plastic tube) with a small needle that is inserted through the skin into the fatty tissue, the cannula is taped in place – not the needle. Insulin pumps may be worn during most athletic activities.

The pump may be placed on one of several sites on the body, including the abdomen, buttocks, thigh, or arm.

Advantages

- Pumps most closely mimic the body's normal release of insulin
- Pumps deliver insulin in two ways:
  - Basal: small, hourly dose that is pre-programmed
  - Bolus: given to cover food or cover high blood sugar
- Pump therapy allows for much greater flexibility in food choices and meal timing
- Children who wear pumps can participate in all school activities

Responsibilities of Pump Wearer

- Must be willing to test blood sugar minimum of 4 times/day
- Must learn how to make adjustments in insulin, food and exercise in response to those test results
- Must respond to blood sugar readings
- Troubleshooting pump if high or low blood sugars
- Keep back up insulin, syringe or pen, and pump supplies available at school and home.

Disposing of Sharps Safely

Millions of individuals with serious health conditions manage their care at home. For example, people with diabetes use syringes to inject their own insulin and lancets to test their blood sugar every day. All this creates a lot of medical waste. What's the best way to handle this waste?

The best way to protect trash handlers and sewage treatment workers against disease or injury and avoid attracting drug abusers looking for syringes to reuse is to follow these guidelines for containment and disposal of sharps.

Containment

- Contain the sharps safely in your own home
- Use a puncture-proof plastic container with tight-fitting screw top. A plastic soda bottle or bleach bottle is good. Don't use glass because it can break. Coffee cans are not recommended because the plastic lids come off too easily. A red sharps container may be purchased at local pharmacies as well.
- Label the container clearly. Write "Contains Sharps" with a waterproof marker directly on the container or on masking tape on the container.
- Once a syringe or lancet is used, immediately put it into a container. Screw on the top. Don't clip, bend or recap the needles because of potential injury to yourself.
- Keep the container away from children!
- When the container is full, screw on the cap tightly. Seal it with heavy-duty tape to be extra-safe.

Disposal

There are different options for getting rid of the container of sharps. Some cities and towns have more options than others. Here are the best bets for safety, health and protection of the environment.

- Call local doctors, pharmacies, clinics, local hospitals or nursing homes and ask if they accept properly contained sharps for disposal. Per New York State Public Health Law, hospitals and nursing homes will accept properly contained home medical waste for disposal.

DO NOT PUT THE SHARPS CONTAINER OUT WITH THE RECYCLABLE PLASTICS—

SHARPS ARE NOT RECYCLABLE.

- Ask local diabetes educators or local American Diabetes Association chapter about sharps disposal programs.
- Call local public works department or solid waste manager. (Check the blue pages of the telephone book for their numbers.) Some communities have special household medical waste collection or drop-off days.
- Call local health departments and ask for the health educator. Ask about special household medical waste disposal programs.

New York State law allows disposal of household sharps, along with household trash. Local laws, however, may prohibit this. Consult your local department of public works for information about laws that apply in your area.

For more information, write:

New York State Department of Health
Diabetes Control Program, Room 780
Empire State Plaza, Corning Tower
Albany, NY 12237
Or call: (518) 474-1222

Helping Others Take Care of the Child with Diabetes

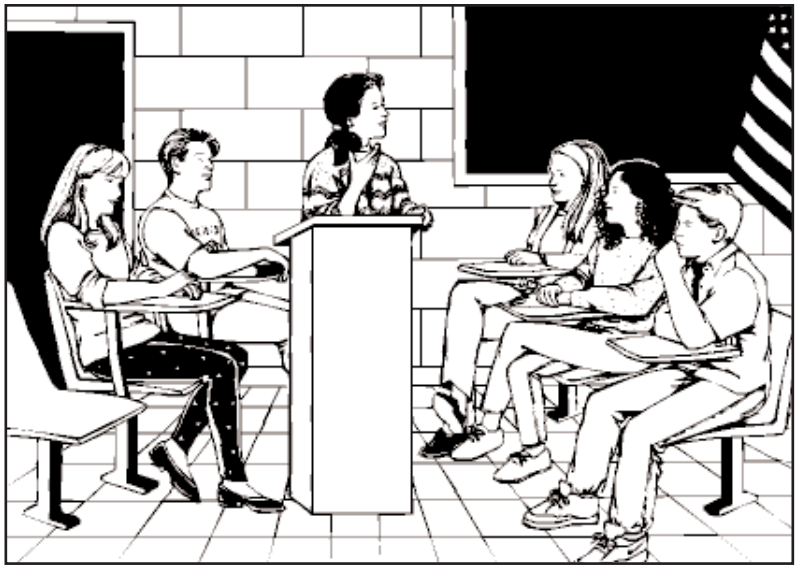
There will be many people who will be responsible for the care and supervision of the child with diabetes. Each day the child will encounter teachers, coaches, bus drivers, baby-sitters, friends, relatives etc. who will need to know some key information in order to safely supervise their care.

This section includes two resources for parents or school personnel to be used to help facilitate communication and to supplement the education provided to these caregivers.

The first resource is the "Diabetes ID Card." The card includes basic information about the care of the child with diabetes. It is suggested that this form be laminated or printed on card stock to be used as a quick reference for teachers, coaches, bus drivers, cafeteria aides, friends, field trip chaperones, etc. This approach works quite well when you need to communicate to a large staff or groups of people. Many families have a large number of cards printed and always have their child carry cards to be distributed as needed to "educate" someone new.

The other resource is a more detailed handout titled "Diabetes Care Information For You." This can be copied and used to communicate to those who care for the child on a more extended basis.

Both resources can be individualized to describe the child's particular schedule, symptoms of low blood sugar and how to treat a reaction.



Diabetes ID Card

My Photo

My name is _____

I am _____ years old and I HAVE DIABETES

This means that my pancreas does not make insulin. Without insulin, the food I eat cannot be used for energy. To treat diabetes, I must take insulin everyday and also try to balance my activity level and the food I eat. Several times a day I must check my blood sugar level using a special meter I always have with me. It's important that you understand some facts about diabetes while I'm in your care. Please read this and keep it nearby.

FACT 1: MEALS AND ACTIVITY

My blood sugar is affected by the food I eat, the amount of activity I get and the amount of insulin I take. Please make sure that:

- my meals and snacks are eaten on time
- I eat my meals at _____, _____, _____
- I may need an extra snack before, during, Or after a strenuous activity. I will check my blood sugar to see if I need to eat. So please allow me to do this.

FACT 2: LOW BLOOD SUGAR REACTIONS

Occasionally, my blood sugar may be too low. (insulin reaction) A reaction is most likely to occur: just before lunch, right after strenuous activity, or if my meal is delayed, or if I don't eat enough food.

If my blood sugar goes too low, I will have the following symptoms or signs:_____

_____

- If this happens **I NEED SUGAR IMMEDIATELY!**
  - you can give me _____
  - you will find this _____
- If I'm not better in 10-15 minutes, give me _____
- I will need to check my blood sugar if possible.
- If my blood sugar drops too low, I may become sleepy, unconscious, or have a seizure.

DO NOT TRY TO FEED ME. INSTEAD CALL 911 or call _____ at _____ (phone #) to give me GLUCAGON by injection. If this happens, please call my parents.

EMERGENCY NUMBERS:

Mother:	Phone:
Father:	Phone:
Other: (relationship)	Phone:

Diabetes Care Information for You

My name is _____

I am _____years old

I am in/on your class/team/school/day — **and I have diabetes**.

This means that my pancreas does not make insulin. Without insulin, the food I eat can not be used for energy. To treat diabetes, I must take insulin everyday and also try to balance my food and activity. Several times a day I must check the amount of sugar in my blood to make sure it's not too high or too low. I test my blood sugar by using a special meter that I always have with me. It's important that you understand some facts about diabetes while I'm with you. So please take the time to read this and keep it nearby.

First of all, I should not be considered as "sick" or "different" but as a normal kid who must follow certain precautions. Some of these are described below.

Participation in activities

I can participate in all school / team activities. I may need to test my blood sugar if the activity is strenuous or if for some reason we suspect that my blood sugar is low or high. I may need to have an extra snack before, during, or after exercise and my parents will make sure I have one with me.

Meals and Snacks

My blood sugar is affected by the amount of food I eat, the amount of activity I have, and the amount of insulin I take. These all must be balanced.

Please make sure that:

- My meals and snacks are eaten at about the same time each day.
- I eat my snacks at about_____, _____, _____.
- I eat my breakfast at about _____.
- I eat my lunch at about _____.
- I eat my dinner at about _____.
- I will have a snack with me everyday or my parents will let you know what to give me instead.

Low Blood Sugar

Occasionally, my blood sugar may be too low. This is called an insulin reaction. A reaction is most likely to occur:

- just before lunch
- right after strenuous exercise
- when I do not eat my meal or snack on time.

The classic signs of low blood sugar are…

- Change in personality
- Confusion
- Shakiness
- Sweatiness
- Headache
- Pallor

If my blood sugar is low, I often have the following symptoms/signs:

_____

_____

_____

_____

_____

If this happens **I NEED SUGAR IMMEDIATELY**!

_____

You can give me

_____

_____

You can find this

_____

This treatment should raise my blood sugar in about 10-15 minutes. If my symptoms continue longer, you should repeat treatment. If my symptoms continue after another 10-15 minutes, please call my parents.

If my blood sugar drops too low, I may become sleepy, unconscious, or have a seizure. DO NOT TRY TO FEED ME! Instead call _____ _____to give me glucagon or call 911. My parents should also be notified.

High Blood Sugars

There may be times when I have high blood sugar. High blood sugar is usually caused by eating too much food, not having enough insulin, or having too little physical activity. If my blood sugar is high, I may be very thirsty and need to drink water. I also may have to urinate a lot and will need to use the bathroom frequently. If my blood sugar is high, I should not exercise and will need to be excused from gym or a game. High blood sugars are not an emergency, but my care may have to be adjusted by my parents or doctor. If you suspect that my blood sugar is high please notify my parents.

Parties and Special Occasions

If possible, please let me or my parents know ahead of time if we are having a party or special event. Foods such as cake, candy, and other "sweets" are usually a part of these occasions. There are no "bad " foods. But if we know ahead of time, my parents may decide to send in a special food for me or adjust my treatment plan so I can have the same foods as everyone else. If a party is not planned, I can have a small portion of the food served instead of my regular snack.

Emergency Phone Numbers

If an emergency arises, or if you have any questions please call my parents.

_____

Parent's name

_____

Phone number

_____

Parent's name

_____

Phone number

_____

Other contact

_____

Phone number

_____

Primary Care Physician

_____

Phone number

Thank you for taking the time to read this information. If you have any questions please ask us.

- **Roles and Responsibilities**
- **You Need a Health Care Plan**
- **Things for Young Adults to Think About**
- **Famous People with Diabetes**

Tools and Information for Children and Young Adults

Roles and Responsibilities

The well being of a child with diabetes requires a collaborative relationship between the school and home. The child and his/her family and the health care team are responsible for overall care planning and management. The school is responsible for assuring that the care plan is implemented and supported in the school setting, and that all factors related to the child's diabetes care are communicated to the family.

Parent/Care Giver/Guardian

- Advocate on behalf of the child
- Participate in the parent conference and planning meeting with school personnel
- Approve the care plan and emergency procedures
- Provide written permission for sharing of medical information with school nurse
- Provide medical equipment, prescriptions, supplies, etc. as indicated in the plan
- Provide food packs for several locations in school and on the bus
- Keep the school informed of any changes in plan of care
- Assist with the staff training if desired

Student

Consistent with their ability, willingness and parental guidance, students may help:

- Monitoring and recording her/his blood glucose
- Informing adults of symptoms of potential emergencies
- Eating the right foods, in the right amounts, on time
- Exercise regularly
- Carrying supplies for possible hypoglycemic reactions

The Healthcare Team

The child's health care team works with the family to educate them about diabetes and day to day management. They have helped the family and child to make the needed lifestyle changes and developed the overall plan of care. The child may see one or more members of the team as often as every three months. It is critical that the services provided in school support and assist in the implementation of the overall care plan. Members of the child's health care team may include: pediatric endocrinologist, pediatrician or family practitioner, nurse practitioner, certified diabetes educator (CDE), dietitian (RD).

You Need a Health Care Plan

Putting together a diabetes care plan is an important part of your first visit. Your diabetes care plan will not be the same as everyone else's.

To work well, the plan must be adapted to your own life. For example, it needs to take account of your work or school schedule, how active you are, what and when you like to eat, your cultural background, and what other medical problems you have.

You need to be involved in devising your diabetes care plan. Otherwise, it's unlikely that the plan will fit into your life or that you will understand what you need to do.

Is your diabetes care plan complete? If so, it should include:

- A list of goals
- A list of the medicines that you will use to control your diabetes
- Advice on eating from a dietician
- A list of changes you need to make in your life, such as getting more exercise or stopping smoking
- Teaching sessions for you and your family on how and when to measure your blood glucose levels and urine ketones, how to keep records of these, and how to treat low blood glucose reactions
- A plan for seeing an eye doctor
- A plan for seeing a foot doctor, if you need to
- A plan for seeing other specialists, if you need to
- Instructions on when to come back to your doctor and when you should call
- A plan for caring for your teeth and seeing the dentist
- A birth-control and pre-pregnancy plan

Adapted from Vermont Manual — Recommendations for Management of Diabetes for Children in School

Things for Young Adults to Think About

A. The "keys" to a car!

- Responsibility for diabetes self-care
- Desire to consider the safety of self and others
- Blood glucose monitoring beforehand
- Test blood glucose at two hour intervals
- Carry diabetes supplies
- Wear medical ID
- Never drive if hypoglycemic

B. Adolescent Challenges

- Growth/body changes
- Struggle for independence
- Identity/body image
- Peer relationships
- Sexuality
- Consistency
- Experimentation

Famous People with Diabetes

Sports

BOBBY CLARKE
Hockey — Philadelphia flyers

KENNY DUCKETT
Football — New Orleans Saints

CHRIS DUDLEY
Basketball — New York Knicks

DEL ENNIS
Baseball – Philadelphia Phillies

CURT FRAISER
Chicago Black Hawks

JONATHON HAYES
Football — Pittsburgh Steelers, Kansas City Chiefs

CHUCK HEIDENRICH
Skiing

DAVE HOLLINS
Baseball Pitcher — Chicago White Sox

STEVE REDGRAVE
Olympic Gold Medallist in Rowing

SUGAR RAY ROBINSON
Boxing

FRANK RUSTICH
Referee

ART SHELL
Football former Raider coach and Denver line coach

MICHAEL TREACY
Skiing, Ski Jumper

SHERRI TURNER
Golfer

NICK WALTERS
Hockey — *Philadelphia Flyers*

JOANN WASHAM
Golfer

Entertainers and Actors

WILFRED BRIMLEY
Actor

HALLE BERRY
Actress — Dependent Type 1 Juvenile

DELTA BURKE
Actress

JERRY MATHERS
Actor —— Leave It To Beaver

JOHNNY CASH
Country singer

PATTI LABELLE
Singer

MARY TYLER MOORE
Actress

ANDREW LLOYD WEBBER
Composer

BRET MICHAELS
Singer

MICK FLEETWOOD
Singer

B.B. KING
Rhythm and Blues Legend

PUMP GIRLS
A new rock band consisting of 4 girls aged 12-15.

GLORIA SHER
Broadway Producer

LUTHER VANDROSS
Singer

MARION WILLIAMS
Gospel Singer

DEANA HERRERA
Miss New York 1998

NICOLE JOHNSON
Miss America 1999

Tools and Information for Parents of Children with Diabetes

- Juvenile Diabetes Research Foundation – Your Child Has Diabetes
- Parents of Children with Diabetes have Responsibilities Too
- Appropriate Accommodations Under Law
  - Parents Rights
- Care Planning
  - Parents Conference
  - Planning Meeting
  - Parent Check List
  - Additional Ideas to Improve Communication, Learning Opportunities and Diabetes Management
  - Individual Care Plans
  - Training
- Age Related Responsibilities of Children
- Psychosocial Aspects of the Child With Diabetes
- Factors Causing Emotional Distress at Diagnosis of Diabetes in a Child
- Sick Day Guidelines
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Juvenile Diabetes Research Foundation Your Child Has Diabetes

You have recently learned that your child has type 1 diabetes (also known as Type 1 or juvenile diabetes). After the initial shock, you may feel tremendous anxiety about two questions:

1. Will I be able to do what is necessary to protect my child's life and health?
2. Will my child be able to live a full and normal life?

As parents and members of the Juvenile Diabetes Foundation International, we have had the same experience and faced the same concerns. We want to assure you that the answer to these questions is a resounding "Yes!" What now seems like a lot of confusing instructions and techniques will soon become second nature to you, and before too long (depending on age of onset), your child will learn to take over much of his or her own care. For right now, bear in mind that:

- You must believe that diabetes will not prevent you or your child from living a full and active life
- You are not alone — there are lots of ways your local JDRF Chapter can help you, from counseling to common sense and support. Use your JDRF International neighbors!

To help out, we've compiled some information and advice you may find useful. This is not a comprehensive brochure. There's much to be learned about diabetes, and you will certainly want to educate yourself thoroughly. After all, the more you understand what diabetes is and how it works, the better able you will be to live with it, and help your child live with it. However, we hope this booklet will provide you with a quick introduction and handy reference source for basic questions.

Some Basic Definitions

What is type 1 diabetes?

In this type of diabetes the pancreas does not produce insulin needed by the body. Insulin is a hormone that allows the body to burn glucose (a form of sugar produced when starches and sugars are digested) for energy. Without insulin, unused glucose builds up in the blood and overflows into the urine.

Insulin injections allow your child's body to use glucose for energy. Insulin is essential in keeping blood sugar levels normal.

The rule of thumb is: food makes the glucose level rise; exercise and insulin make the glucose level fall.

Hypoglycemia/Low Blood Sugar (Insulin Reaction)

Sometimes called insulin shock, this is when the blood sugar level drops rapidly. It happens suddenly if a child using insulin eats too little food, doesn't eat soon enough, or exercises too much. This condition must be treated quickly because hypoglycemia can lead to unconsciousness.

Symptoms include crankiness, sweating, rapid pulse, cold skin, trembling hands and feet

Treatment priority is to get sugary food into the child fast. Fruit juice, candy, non-diet soda are suggested. If necessary, liquid sugar, jam or honey can be rubbed on the inside of the child's cheek with a finger. Once the reaction subsides, the child should be given a more non-sugar food to prevent a recurrence. Milk, bread, crackers are advised.

Diabetes Coma (Ketoacidosis)

This is a diabetic emergency that develops gradually if a diabetic gets into a state of "hyperglycemia" — too much sugar and not enough insulin to use it — and the condition isn't treated. Since the body can't use the sugar for energy, it "steals" energy from the fats stored in the body. When fats are broken down, "ketones" are released: too many ketones become poisonous, and without proper treatment, the diabetic may fall into a coma requiring hospitalization.

Symptoms include dry, hot skin, excessive urination, excessive thirst, drowsiness/lethargy, deep and/or labored breathing, fruity-smelling breath, elevated sugar and ketones in blood.

The Goals of Diabetes Control

"Control" means keeping the level of sugar in the blood as close to normal as possible. The goals of control are:

- To achieve the right balance between insulin levels, food intake and exercise.
- To avoid the problems (hyper- or hypoglycemia) that result from too high or too low blood sugar levels.
- To maintain normal growth and development for your child
- To have a happy child.

Professional Help

Because children with diabetes have special needs, we recommend a "team approach" to your child's medical care. The team should include a physician or pediatrician who has experience treating children with diabetes, a nurse-educator, a dietician who can help with your child's special dietary considerations, and perhaps a social worker. For recommendations, and for a listing of diabetes specialists and diabetes treatment centers, contact your local JDRF chapter.

Caring For A Child with Diabetes

Diabetes does make a child somewhat different from classmates and brothers and sisters who do not have diabetes. The trick is for you to help your child accept the difference with a minimum of fuss. *You must learn to provide supervision while giving your child responsibility to learn SELF-CARE and control.* How quickly a child takes on responsibility varies, but to encourage independence and relieve anxiety, allow your child to participate to the full extent of his ability.

Controlling Diabetes

Good nutrition, physical activity and insulin are the three building blocks of diabetes control.

Nutrition: Other than concentrated sweets, children with diabetes can eat the same ordinary nutritious food the rest of the family eats. The only real difference is that both the amount of food the child eats, and when he eats must be as consistent as possible.

Physical Activity is important because it burns sugar without insulin and keeps blood sugar levels down. Before strenuous activity, your child should have an extra snack to avoid too sudden a drop in blood sugar.

Insulin dosage and the number of daily injections will be determined by your child's physician. Even after your child starts to manage his or her own injections, you should administer it occasionally so you won't forget the technique if an emergency arises.

Be Realistic About Control

There is no such thing as perfectly controlled blood sugar and no matter how well regulated the insulin dosage may be, children are too busy and diversified in their daily activities to lead an "ideal" predictable day-to-day life.

Occasionally the child may need a "vacation" from self-care, and the parent should be willing to take over.

What About Unexplained High Blood Sugar?

If a child's blood or urine test shows a high sugar level that seems to be unexplainable, keep in mind that it doesn't always mean he or she has eaten excessively or inappropriately. A child can be very responsible about diet and insulin and still spill sugar occasionally. This can occur due to illness, such as a cold, flu or fever. Particularly during adolescence, hormonal changes make diabetes especially hard to control.

Straying from one's meal plan from time to time is not life threatening. One chocolate bar never hurt a child with diabetes, and may in fact be a good source of sugar before exercising. Remember, sugar can be a friend as well as an enemy.

Your Child's Anxiety

Children with diabetes worry more. And why not? Children with diabetes are threatened both physically and psychologically—they have important responsibilities and know that diabetes can do unpleasant things to them. As a parent, you must be sympathetic without becoming over-protective.

Self-care creates self-confidence. Self-care is a lot to ask of a child. But as your child masters the situation and understands the cues which tell him how he is doing, he will gain a means through which maturity, independence, self-esteem and self-control can be achieved.

Adolescence: Difficult Years

Hormonal Changes

Teenagers often seem incapable of following their self-care routine. They have mood swings, rebel against authority, are grumpy and distant. You may wonder if bad attitude is the reason their blood glucose levels are so difficult to control.

The fact is, hormonal changes which no one can control are affecting your child's blood sugar levels. Even if your child is conscientious about self-control, there may still be big swings in glucose levels. So remember, poor control is not just "in their head" — it's in their body too.

The Role of the Doctor

It is vital for a teenager to have a doctor he or she can talk to freely without a parent getting involved. The doctor can provide expert advice without making the teenager feel childish or overly dependent.

Family Attitude Makes A Difference

The way you and your family respond to the situation will determine the way your child accepts or denies his or her diabetes and copes with its management. Evidence suggests the following:

- In an atmosphere of relaxed, knowledgeable, tolerant through alert acceptance, a child with diabetes will thrive physically and emotionally and take responsibility for self-care.
- An overly strict or punishing attitude will often result in an angry and rebellious child who deliberately fails to take care of himself.
- Parental denial of the significance and dangers of diabetes will induce the same denial in the child, also resulting in poor control.
- An over-protective parent will produce an overly dependent child.

It's a difficult balancing act for parents, but we have found that by accepting the realities of living with diabetes — by understanding every aspect of the disease — our children will learn to do likewise and lead full, active lives "like every other kid."

Adapted from JDRF International Educational Publications

Parents of Children with Diabetes Have Responsibilities Too

- Fill out Student Information Forms
- Provide the school with:
  - Snacks, if required on a regular basis
  - Blood glucose meter and/or supplies, these can be kept at school, or brought daily
- The child with diabetes needs to have quick sugar emergency supplies with him/her at all time. He/she should carry something like:
  - Juice
  - Glucose tablets
  - Glucose gel
- Prepare extra snacks to keep at school in case they are needed. An old lunch box or a shoebox labeled with your child's name works well as a container. Include snacks such as:
  - Crackers
  - Graham Crackers
  - Peanut Butter
  - Granola Bars
  - Raisins
- Check with the school nurse weekly to see if items need to be replaced.

Appropriate Accommodations Under Law

Any school receiving federal funding must accommodate the special needs of its students in order to assure them a "free, appropriate public education." Such accommodation should be documented in either a Section 504 plan or in an Individualized Education Program. (IEP)

Work with the school in establishing written documentation of accommodation explicitly detailing the specific needs of your child with diabetes.

Some of the issues that a written plan might include:

1. Eating whenever and wherever necessary.
2. Going to the bathroom or water fountain as needed.
3. Participating fully in all extra-curricular activities, including sports and field trips.
4. Eating lunch at an appropriate time with enough time to finish eating.
5. Absence related to medical visits.
6. Assistance with blood glucose monitoring or insulin injections, where appropriate.
7. Opportunity to make up missed schoolwork or receive additional instruction when absent.

These are examples of some of the things to include in an individual plan.
Consult members of your child's health care team when determining individual recommendations.

Parents' Rights

As the parent or legal guardian of a child with diabetes in the public school system, you have the right:

1. To request that your child be found eligible for special services if required.
2. To schedule a meeting with school officials to develop an Individualized Education Program (IEP) under IDEA or a Section 504 accommodation plan to address your child's specific needs.
3. You have the right to bring experts to this meeting to better explain your child's diabetes management.
4. To develop an IEP or Section 504 plan to accommodate the unique requirements of your child. This plan may precisely set out the types of special related services your child needs to receive.
5. To not sign a plan unless it conforms to your child's medical needs. The law requires that all parties agree to the individual plan before it is established. Be reasonable, but stand firm.
6. To be notified and agree to any proposed changes in your plan

Education

Educating the school personnel about your child's individual needs is an important step. The process of developing an IEP or Section 504 plan educates the school about diabetes and how it affects your child. Establishing an accommodation plan that meets your child's needs might be a negotiation process that requires communication. Remember that it is your right to request and receive reasonable accommodation to ensure that your child receives a free appropriate public education.

If your child's needs are not being recognized, you have the right to contact the New York State Education Department. The following offices may be helpful:

Statewide Advocacy for School Health Services:
716-349-7630

Comprehensive Health and Pupil Services:
518-486-6090

Office for Special Education Policy
and Quality Assurance:
518-473-2878

For information about an Individualized Education Program or Section 504 Accommodation Plan:

National Information Center for Children and Youth with Disabilities

PO Box 1492
Washington, DC 20013
1-800-695-0285

For technical assistance and referrals for local support:

National Parent Network on Disabilities

1130-17th Street, NW, Suite 400
Washington, DC 20036
202-463-2299
(Fax) 202-463-9405

Adapted from the American Diabetes Association

Care Planning

Care planning in the school has four components:

Parent Conference. A conference with parents, and the school nurse to identify the child's needs, discuss components of the care plan, and develop the agenda for a school wide planning meeting.

Planning Meeting. This meeting of key staff should be held in the fall before the school year starts, or when a child is newly diagnosed.

"Individual Care Plan". The School Nurse, using information gathered at the planning meeting, should prepare the written plan. Key staff and the child's family must agree to the plan. The plan may be incorporated into a "504" plan if the child's needs will be covered by this legislation. See "Appropriate Accommodations Under Law" later in this chapter for a description of legislative rules that may apply to children with diabetes.

Training. The school nurse should arrange for training for all school staff. The nurse should do the training with the assistance of the child's parents and/or invited members of the child's health care team. This may involve one or more sessions depending on the roles assigned to different people.

NOTE: A list of resources that may help the school staff with care planning is included in the Resources section at the end of the appendices.

Parent Conference

This meeting is held with parents, the principal, the school nurse and others who may be invited by one of these parties. The purpose is to get to know one another, share information about the child and school, prepare for the initial planning meeting, and determine who will need to attend the planning meeting.

The parent checklist should be prepared at the parent conference so that the necessary forms and supplies can be brought to the planning meeting. In this section are sample forms that the school might want to use.

The information needed from the parent is included on the suggested Data/Information sheet. This may be completed by the parent in advance of the parent conference and brought with them of filled out during the conference.

Parent Check List

This checklist is provided to help parents identify the forms, supplies and other materials they need to bring to school. The list needs to be modified for individual children.

All items on the checklist should be sent to the school nurse.

- ☐ Data/Information form
- ☐ Photograph of child
- ☐ Signed release of information for physician (s)
- ☐ Monitoring supplies: Lancets, meter, strips, alcohol, ketone strips, etc.
- ☐ Snack (Low) packs. Number: _____
- ☐ Glucose tablets, Gel (tubes). Number: _____
- ☐ Pump Supplies (if applicable)
- ☐ Record keeping sheets
- ☐ Insulin and related supplies:
- ☐ Syringes, alcohol, etc.
- ☐ Prescription Medication Order and Permission form for insulin
- ☐ Glucagon kits with premeasured dosage. Number:____
- ☐ Prescription Medication Order and Permission form for Glucagon

Adapted from Vermont Manual — Recommendations for Management of Diabetes for Children in School

Planning Meeting

Each fall, and at other times during the school year for children who are newly diagnosed, the school nurse in the school district should organize and facilitate a planning meeting to develop an individual diabetes care plan for use in the school setting.

Meeting participants should include everyone that may have a role in the child's diabetes care. Participants may include:

- Family and child
- Principal
- School nurse
- Current year classroom teacher(s)
- Past year classroom teacher(s)
- Food service manager
- Physical education teacher/coach
- Counselor or Social Worker
- Bus driver
- Other school staff with direct responsibility for child
- Members of the health care team, if invited by parents

Suggested agenda items:

- Overview of Type 1 Diabetes and its management
- Roles and responsibilities of staff members
- Identify staff in the school who will serve as resources for others
- Determine the hierarchy of personnel expected to respond in emergency situations
- Determine the location of food kits, glucagon, and other supplies in the school building
- Determine where the plan will be kept and how individual components will be shared with appropriate staff
- How training for staff with specific responsibilities will be done
- What is an emergency and what to do

Additional Ideas to Improve Communication, Learning Opportunities and Diabetes Management

Home/School Communication: To develop parent/student school communications:

1. There will be ongoing communication between parents and case manager

2. Parent-teacher meetings will be scheduled at regular times especially at the beginning of the school year and other transition times. Parents want to be contacted immediately if any academic or social concerns arise.

3. Health concerns will be addressed as the need indicates.

4. Consistency is important in academic plans. Transition meetings including last and current teaching staff, nursing and parents will be scheduled.

Organization/Management: To modify the instructional day:

1. Mary will need modification of non-academic time (long lunch, extra snack period on occasion).

Alternative Teaching Strategies/Accommodations: To modify teaching methods:

1. Adjust testing procedures:

- Mary may need to have open bathroom privileges during standardized tests. She should be seated so she can come and go from the room easily. Please remind her that she can go at anytime despite testing rules.
- Mary must keep her low pack with equipment and snacks next to her in the testing area.
- If Mary goes to the bathroom before or during the testing, special accommodations may need to be made to repeat instructions or to lengthen her testing time.
- Mary may need to have a snack at different times and intervals than the other students.

2. Individualize classroom/homework assignments:

- There will be a need to explain assignments or adjust them if Mary's blood glucose is unusually high or low on certain days. Her level of concentration is affected and she will need accommodations.

3. Repeat or structure instructions for in-class or homework assignments.

- Mary may miss part of an assignment or a class while testing, in the bathroom or eating her snack. Repeating verbal/written instructions will be needed.
- If Mary's blood sugar is unusually high or low (>300 or <80), she may feel shaky, slightly disoriented or very distracted. The classroom teacher will need to revisit instructions or concepts she may have missed in class.

Student Precautions: Please see Diabetic Day Plan Evaluation data used to make this decision:

- Diagnosis of Diabetes Mellitus Type 1
- Parents report and past concerns
- Teachers observation in class
- Academic performance
- Articles and data provided by parents

The following related aids and services are recommended:

1. Health services: Ideally, the school nurse will be available on a daily basis to provide support and guidance to Mary and the school staff. A trained substitute nurse will be available if Susan Doe is not in school.

- Mary's classroom teacher and one other adult staff member should be trained in the administration of Glucagon
- Susan Doe, RN, should inform all appropriate teaching staff and cafeteria staff about Mary's condition and what to do in an emergency.

2. Equipment and Food Items

- Mary will carry her own glucometer, finger lancets and glucose strips. She will also carry a "low pack" with juice, and a snack.
- There will be extra juice, and snacks kept in the classroom area, the library and in exploratory classes as needed.
- The nurse's office will have extra juice, crackers, peanut butter and other snacks for Mary and will keep a vial of insulin, extra glucose strips, syringes and ketone strips for urgent use. A Glucagon kit will be kept in the locked medicine cabinet in the nurse's office.
- Mary's parents will provide all food and equipment to the school. Susan Doe, RN, will be responsible for distributing the food and maintaining the supply.

Adapted from Vermont Manual–Recommendations for Management of Diabetes for Children in School

Individual Care Plan

Planning is key to the successful management of care for children with diabetes. In schools, the individual care plan is an essential tool for accomplishing successful management.

The school nurse, in collaboration with parents and others, develops this care plan outlining specific health care to be given to the student. It should be available to all staff working with the child. The school nurse may prepare a summary of pertinent information on the individual child for their use and provide it to each of the child's teachers.

Routine daily care includes:

- Blood glucose monitoring routine
- Phone numbers of parents, guardians, care providers and emergency contacts
- Blood glucose values and specify responses required
- Daily schedule of food, insulin and activity
- Special events/circumstances
- Location of supplies and food
- Disposal of syringes, lancets, etc.
- Developmental levels and cognitive and physical abilities of the school-aged child and adolescent should be incorporated in the care plan for the child with diabetes

Emergencies:

Children with diabetes can have problems despite the best efforts at control. School staff needs to determine and record what constitutes an emergency situation and what to do about it. Parents and health care team should provide guidance for the care plan.

Sample Care Plans:

Please see appendix for attached sample plans done by a school nurse. These have integrated aspects of the individual care plan that follows with a School 504 Plan and a Student Accommodation Plan.

Training

Goals for training: Everyone mentioned in the plan knows their role in carrying out the plan, how it related to the roles of others and when and where to seek help.

Preparation: Assess school personnel to determine their knowledge of and comfort level with caring for the student. Modify the training session accordingly.

Time: The initial session should take about 30 minutes. Some members of the staff may need additional individual training around their specific roles.

Attendance: Include all staff mentioned in the plan plus administrative and counseling staff and any others who may interact with the child during the school session.

Suggested Components of Training:

- Introduction to the child's individual care plan
- Type 1 diabetes: what it is, how it is managed (if not covered at planning meeting)
- Monitoring tools: glucometer, written records, etc.
- Signs and symptoms of hypoglycemia and hyperglycemia
- Procedures for routine care of the individual student
- Emergency procedures
- Overview of universal health and safety guidelines (OSHA) and disposal of supplies
- Monitoring techniques (for those who may do finger sticks)
- Glucagon administration (for those named in the emergency plan)
- Insulin administration (if in the plan)

Adapted from Vermont Manual — Recommendations for Management of Diabetes in School

Age Related Responsibilities of Children

Age alone should not be the guideline used to assume that a child is ready to accept responsibility for managing components of diabetes care. It is important to realize that children develop at different rates. There is no such thing as the "magic age" when a child suddenly can perform a certain skill or be "responsible" for their care. Children need to be encouraged and supported to gradually assume diabetes self care as they mature and demonstrate confidence. The adult must be sure that when the responsibility is given, the child is willing to take it. Keep in mind that a child's ability or desire to perform certain diabetes related tasks might vary from day to day. It is normal for the child to regress and depend once again on an adult to handle the responsibility. Parents, school nurses, relatives and other reliable adults must be sensitive to the child's needs and be available to take over with no questions asked.

The charts below provide the adult with guidelines to follow when determining the average age for assuming diabetes related skills. Keep in mind that these are general recommendations but each child must be evaluated individually. Independence takes a long time and requires a lot of help and supervision from adults. The child who feels that they have a network of adults to support and assist with diabetes management will generally be in better diabetes control.

Responsibilities of Children at Different Ages

Be aware of different stages in normal childhood development.

Recognize that responsibilities related to diabetes must depend on the age and development of the child.

Average Responsibilities

Age	Non-diabetes related	Diabetes related
3 – 7 years	• Imaginative/concrete thinkers • Cannot think abstractly • Self-centered	• Parent supervision for all tasks • Gradually learns to cooperate for blood sugar tests and insulin shots • Inconsistent with food choices • Gradually learns to recognize hypoglycemia • Not much concept of time
7 – 12 years	• Concrete thinkers • More logical and understanding • More curious • More social • More responsible	• Can learn to test blood sugars • At age 10 or 11, can draw up and give shots on occasion • Can make own food choices • Can recognize and treat hypoglycemia • By 11 or 12 years, can be responsible for remembering snack, but may still need assistance of alarm watches or parent reminders
12 – 18 years	• More independent • Behavior varies • Body image important • Away from home more • More responsible • Abstract thinking	• Capable of doing the majority of shots and blood tests but still needs some parental supervision and review at times to make decisions about dosage • Knows which food to eat • Gradually recognizes the importance of good sugar control to prevent later complications • May be more willing to inject multiple shots per day

Average Age for Diabetes Related Skills

Skill	Recommended by the ADA	*Survey of Care Providers
Hypoglycemia		
Recognizes and Reports	8-10	4-9
Able to treat	10-12	6-10
Anticipates/Prevents	14-16	7-11
Blood Glucose		
Testing (by meter)	8-10	7-11
Insulin Injection		
Gives to Self (at least sometimes)	N/A	8-11
Draws 2 insulins	12-14	8-12
Able to adjust dose	14-16	12-16
Diet		
Identifies appropriate pre-exercise snack	10-12	10-13
States role of diet in care	14-16	9-15
Able to alter food in relation to blood glucose level	14-16	10-15

**Abstracted from a survey done by Srs. T. Wysocki, P. Meinhold, D.J. Cox and W.L. Clarke at Ohio State University and The University of Virginia (Diabetes Care 11:54-58, 1990).*

Adapted from Understanding IDDM

Psychosocial Aspects of the Child with Diabetes

The diagnosis of diabetes in a child can have a major impact on the entire family. In many cases, diabetes is the worst thing that has ever happened to them. Each individual in the family is affected and the feelings experienced often follow a similar pattern. These feelings may linger for a long time if they are not recognized and expressed. Dealing with feelings openly can help the child and the family learn to face the daily challenges and facilitate an acceptance of having diabetes as part of their family. The feelings described are present in **all** families who have a child with diabetes.

Denial

"This can't really be happening"

"I don't need to take my insulin today"

"It's not that serious"

"No one has to know I have diabetes"

The child or family member may find it difficult to talk even about diabetes. It may be too painful to face. This can interfere with the medical team's ability to educate and treat the child. At times, the child or the parent may try to hide their feelings to be "strong" or not to upset the others. This denial may make the child's ability to adjust to the daily struggles much more difficult.

Sadness

The child of family member may cry, feel depressed, or hopeless. Feeling sad is normal and brief periods of sadness can occur for years after diagnosis. It is important for the child or family member to express their sadness and to openly share their feelings. They should be encouraged to seek professional help if they feel depressed or hopeless for a long period of time.

Anger

"Why me or Why my child?"

"Why do I have to do it all?"

"It isn't fair!"

Anger may be vented toward nurses, doctors, God, spouse, friends, siblings, teachers, the list is endless. Although this also is a normal feeling, it may interfere with the child or the family member's ability to adjust to the daily pressures of managing diabetes. If it is having a major impact on the child or the family as a unit, individual counseling may be helpful.

Fear

"What will this mean for my child's life?"

"What's going to happen?"

"How can we ever leave him alone?"

There are so many fears that are expressed by the family and the child. Parents fear the increase in responsibility, the expenses, they worry about the future and doubt their ability to manage diabetes every day. Siblings fear they may "get" diabetes too. The child fears hospitals, injections, fingersticks, low blood sugars and even death. He/she may feel so different from friends. All these fears are certainly justified, but can be allayed if they are openly discussed and support given as needed.

Guilt

"What did I do to deserve this?"

"If I just hadn't eaten so much sugar."

"The diabetes may have come from my side of the family."

Parents commonly feel that they "gave" their child diabetes. This idea occurs even though we know other factors also play a role in the onset of diabetes. The child may feel diabetes is a punishment for bad behavior. These feelings are very common at the time of diagnosis. As time goes on, the child feels guilty if he/she "sneaks" extra candy, skips doing blood tests, lies about blood sugar results or does not "follow the rules." Parents feel guilty whenever they have to enforce the "rules" of self-management or deny their child a "treat." The opportunities to feel guilty are always there. Parents and children need to be supported in their efforts each day.

Acceptance

"I don't like having diabetes but I guess I can handle it."

"The shots aren't so bad, I just wish I could eat whatever I want."

This stage may take a long time to reach and some may never come to accept diabetes as part of their life. A well-adjusted family learns to cope with the endless demands and struggles diabetes can add to their life. They feel more confident and hopeful. Sadness and anger may still occur but these periods are temporary. The family needs to seek out resources in the community and within their family to ease the burden of daily management.

Dealing with all of these emotions can be a challenge for the family with diabetes. They must come to the understanding that diabetes should not prevent a child from living a full and active life. They are not alone…there are many resources available in the community and many other families traveling the same road.

Adapted from: "Understanding Insulin-dependent Diabetes" University of Colorado Health Sciences Center. 1995.

Factors Causing Emotional Distress at Diagnosis of Diabetes in a Child

• Uncertainty about the outcome of the immediate situation

• Feelings of intense guilt and anger about the occurrence of diabetes

• Feelings of incompetence and helplessness about the responsibility for management of the illness

• Loss of valued life goals and aspirations because of illness

• Anxiety about planning for an uncertain future

• Recognition of the necessity for a permanent change in living pattern due to diabetes

Sick Day Guidelines

Effect of Illness/Injury on Diabetes Control

- Illness places stress on the body and usually will have the effect of raising blood glucose levels.
- Flu type illness with nausea, vomiting and/or diarrhea can upset the electrolyte balance of the body, causing dehydration and possibly ketoacidosis.
- Injuries, like illness, also place a stress on the body and can have the effect of raising glucose levels.

Responsibilities of the School Personnel

- If possible determine the student's blood glucose level.*
- Give comfort measures as you would with any student without diabetes.
- If the glucose level is low or the student is showing symptoms of hypoglycemia, have the student take a sip only of a regular soda at 5-10 minute intervals. Small, frequent sips are often tolerated even by a student with nausea or vomiting.
- If the glucose level is high, or if symptoms of hyperglycemia are present the student can be given sips of sugar-free soda. If possible and if ordered, check for the presence of urine ketones.

***If the student is unconscious, unresponsive or uncooperative, or severely injured, notify the appropriate emergency personnel immediately. Do not delay getting an emergency squad by first obtaining a glucose level. This can be obtained after the emergency squad is called.**

- If respirations are deep and labored, and if the student's breath smells fruity or like alcohol, the student may have ketoacidosis. Report to the parent, guardian or physician immediately.
- In cases of injury, administer the usual first aid measures as well as determining the blood glucose level.
- Notify the parents/guardian of the student's symptoms, injury, and blood glucose level. If unable to reach a parent, call the student's physician.

Adapted from American Diabetes Association

What To Put In Your Sick Day Cupboard

Keep the following in a box marked "For Sick Days"

- A copy of "Sick Day Rules"
- Ketone strips
- Glucagon kit
- Thermometer
- Aspirin-free products such as liquid, chewables, and/or suppositories
- Broth or bouillon
- Can of soup
- Cans of soda — sugared and sugar-free
- Cans of concentrated juice (one that does not need refrigeration)
- Gelatin — sugared and sugar-free
- Powdered fruit drink — sugared and sugar-free
- Pedialyte or other rehydration product for very young children

Travel, Vacations and Camp

Travel Guidelines

Prepare Ahead

1. The patients' physician should be contacted for the following items:

- A letter describing patient's current medical condition and a list of medications. This may be used to verify patient's medical status.
- Written prescriptions for all medications including: oral agents, insulin, syringes, test strips, other medications taken.
- May also need prescriptions to treat other possible illnesses that the patient may develop on the trip (e.g., antibiotics, meds. for diarrhea, motion sickness, etc.)

2. If immunizations are needed, they should be done at least one month in advance of the trip in the event that an adverse reaction to the vaccine is experienced. The local health department is a good resource to call to inquire about immunizations.

3. The patient should always wear a MEDIC ALERT bracelet or necklace and carry an ID card in their wallet or purse detailing the management regimen, physician name and phone number.

4. The airlines can arrange a diabetes meal plan when called several days in advance.

5. If prone to motion sickness, take motion sickness medication or wear Sea Bands (acupressure wristbands available at the pharmacy — no prescription is necessary) prior to or at the time of travel.

6. Diabetes supplies should be taken in a carry-on bag:
Food:

- At least one day's supply of food in case of delayed or canceled flights, delayed meals, or restaurants being closed (e.g., packaged cheese and crackers, containers of juice or fruit).
- Quick sugar source: glucose tablets, glucose gel.

While in Travel

- Reduce jet lag and dehydration by drinking adequate amount of fluids.
- Try to maintain some degree of activity, especially on a longer flight; walk about the cabin.
- If taking insulin while in flight, less air will need to be injected into the bottle, due to increased pressure inside the cabin.

When you reach your destination

1. Secure syringes in a locked suitcase. Use a small, plastic opaque bottle for disposal of all lancets and syringes.

2. While away, watch food intake, activity level and medications:

- Divide meal plan so that something is eaten at least every 4 hours.
- If activity is greater than normal have an extra snack between meals, preferably protein and complex carbohydrate (e.g., ½ meat sandwich or cheese and crackers)
- Test blood glucose every 4 hours and be prepared to take supplemental insulin, if prescribed.

3. When going to the beach

- Use sun screen or lotion
- Cover arms, shoulders, legs, head and eyes to protect you from the sun

Adapted from the South Carolina Chapter of the American Diabetes Association

Vacations

Diabetes should not interfere with vacations, which are a normal part of life. Some extra "planning ahead" is required.

- Pack enough insulin and supplies to last the whole time you are away. They may not be available at your vacation area.
- Make a checklist ahead of time of things to take. Double-check this list at the last minute.
- If you are traveling in hot weather, keep glucagon, insulin and blood sugar strips cool. They spoil if they get above 90 degrees or if they freeze. If you travel by plane, keep all of your supplies in your carry-on luggage. It may freeze in the luggage compartment or get lost!
- Carry a form of sugar with you to treat reactions.
- Have adequate snacks available in case meals are not served on time.
- Always wear diabetes identification.
- Get the name of a doctor in your vacation area so you can call him/her if necessary. Take your own doctor's phone number too. He/she knows your case best, and it may be reassuring to make a long distance phone call when help is needed.
- Visit or call your doctor two weeks before you leave, so that you can work out any problems before the last minute. Remember to take his/her list of suggestions with you.
- If you expect to be more active on the vacation (hiking, camping, skiing, etc.) you may need to decrease insulin dose. Discuss this with your doctor or nurse.
- If foreign travel is planned, carry a letter from the physician explaining why insulin syringes and other supplies are being transported through customs.
- When going to a non-English speaking country, the patient should learn phrases in the language of the country to which they will travel: "**I HAVE DIABETES**," "**I NEED SUGAR OR ORANGE JUICE**," "**I NEED A DOCTOR**," and phrases to order meals. It is wise to take a bilingual dictionary.
- A traveling companion should be prepared to recognize and treat diabetic emergencies (e.g., Diabetes Keto-Acidosis, hypoglycemia).
- The most important advice is to **HAVE FUN!**

Camp programs for children with diabetes can provide children with role models as well as the opportunity to meet other children their age who have the same challenges. Most of the young people who work at diabetes camps are living very healthy successful lives with diabetes. Establishing relationships with them can benefit your child's long term health and self-esteem.

Community and/or residential camps that are not diabetes camp programs should be able to accommodate your child's needs if provided with appropriate support. It is crucial that your child's needs be communicated completely and that camp staff be trained appropriately.

Check List of Items to Take Along on Vacations, Travel, Camp

- ☐ Insulin
- ☐ Syringes
- ☐ Alcohol Swabs
- ☐ Blood Sugar Monitor
- ☐ Blood Sugar Test Strips
- ☐ Glucagon
- ☐ Glucose Tabs or Some Form of Sugar
- ☐ Snacks in Small Easy to Use Packages
- ☐ List of All Medications
- ☐ Identification (Name, Address, Age)
- ☐ Medical Identification Bracelet/Necklace/Card
- ☐ Name and Phone Number of Primary Care Doctor
- ☐ Name and Phone Numbers of Parents When Traveling Without Them

Check List for Camp Staff

Child's Name: _____ Child's Age: _____

- ☐ Amount of Daily Insulin Requirements
- ☐ Monitor Blood Sugar Level prior to and during exercise/play
- ☐ Importance of Exercise
- ☐ Watch for Signs of Hypoglycemia (Low Blood Sugar) *(please fill in usual signs for your child)*

_____

_____

- ☐ Watch for Signs of Hyperglycemia (High Blood Sugar) *(please fill in usual signs for your child)*

_____

_____

- ☐ Nutrition (meal) Requirements
- ☐ Timing of Meals and Snacks
- ☐ Check List of Items to Bring on Field Trips *(please fill in usual items you pack for your child)*

_____

_____

Medical Identification Products

Health care and emergency personnel encourage people with diabetes to wear some form of medical identification. The reason is obvious: Such identification can save time in an emergency and may save your life.

Key factors include age, form of identification, costs, and the services provided with the tag.

Age: Everyone with diabetes should have a medical identification tag.

Form: Medical identifications take many forms: wrist or ankle bracelets, necklace pendants or neck chains with dog tags, watch charms, shoe tags, iron-on tags, or wallet cards.

Service and cost: No matter what the form, medical identifications carry at least three pieces of information — your name, medical condition, and an emergency phone number for more information. However, some medical identifications carry the emergency number you choose, such as yours or your neighbor's, while others carry a number that is staffed by emergency personnel 24 hours a day with your medical records and emergency numbers at hand.

Adapted from Diabetes Forecast website

Appendix

- Blood Glucose Monitoring at School
- Sample Letter from MD to School Personnel
- Authorization for Release of Medical Information
- State Education Department — Frequently Asked Questions
- Prescription Medication Order and Permission Form
- Medical Statement for Children Requiring Modifications in School Meals
- Sample Student Accommodation Plan
- Sample 504 Plan for School Year
- Health Care Professional's Letter Granting Permission to Treat Child in School Setting
- American Diabetes Association 1999 Quick Reference Guide to Standards of Care
- Care of Children with Diabetes in the School and Day Care Settings
- Additional Diabetes Internet Links
- Directory of Diabetes Organizations
- Order Form for New York State Publications
- Publications

School Executive's Bulletin - January 2001

A Publication of the New York State Education Department's Office of Elementary, Middle, Secondary and Continuing Education

Blood Glucose Monitoring at School

Children with diabetes have the right to care for their diabetes at school. This right is based on federal laws (Individuals With Disabilities Education Act [IDEA] and section 504 of the Rehabilitation Act of 1973) which provide protection against discrimination for children with disabilities, including diabetes. Accordingly, while at school, each child with diabetes must be allowed to do blood glucose monitoring at any time within any place in the school. Blood glucose monitoring is the testing of one's blood sugar with a small portable machine called a blood glucose meter. At times, a child may need assistance with the blood glucose monitoring procedure. In a March 1995 memorandum to schools, blood glucose monitoring was considered a nursing function that could not be delegated to unlicensed persons. It has been determined that blood glucose monitoring may now be performed by anyone in the school setting. Each child with diabetes must be allowed to do blood glucose monitoring and receive assistance, if necessary, with this procedure. If you have any questions on children with diabetes, please call the Comprehensive Health and Pupil Services Team at (518) 486-6090.

SAMPLE LETTER FROM MD TO SCHOOL PERSONNEL

Date: _____

TO WHOM IT MAY CONCERN:

Re: _____

This child has Type 1 diabetes mellitus and is currently on _____ and _____ insulin. It is necessary for him/her to check his/her blood sugars prior to lunch each day and at anytime they have symptoms of hypoglycemia or hyperglycemia. They may need to take regular or Lispro insulin while at school per their prescribed algorithm.

This child should also have Glucagon available to be administered at the time of a severe hypoglycemic reaction when he/she is unresponsive or may choke on oral treatments. Otherwise, he/she should have food available to treat hypoglycemia (i.e. juice, glucose tabs, treatments in not less than 15 gm amounts).

I would be happy to help with any questions or concerns.

Sincerely,

_____ _____

Certified Diabetes Educator Signature Primary Care Physician Signature

Authorization for Release of Medical Information

To: _____

(Doctor's Name)

From: _____

_____

(Your name and address)

Please send information about my child _____

Date of Birth: ____ /____ /____

To: _____

_____

Information to be sent:

☐ Problem list only

☐ An update on _____

☐ Ongoing progress on _____

☐ Consultation by school nurse _____

_____

(Signature of parent/guardian)

Adapted from Vermont Manual — Recommendations for Management of Diabetes for Children in School

NEW YORK
THE STATE OF LEARNING

THE STATE EDUCATION DEPARTMENT / THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, N.Y. 12234

March 1998

TO: District Superintendents; Presidents of Boards of Education; Superintendents of Public Schools; Superintendents of State-Operated and State-Supported Schools; Nonpublic School Administrators and Educators; State and Local Teacher Associations; New York City Board of Education; Executive Directors of Approved Private Schools; Principals of Public Schools; Directors of Special Education; Chairpersons of Committees on Special Education; Chairpersons of Committees on Preschool Special Education; Directors of Pupil Personnel Services; Directors of Approved Preschool Programs and Preschool Educators; Early Childhood Direction Centers; School Nurses/ School Nurse Teachers/School Nurse Practitioners; School Physicians; Commissioner's Advisory Panel for Special Education Services; Impartial Hearing Officers; SETRC Project Directors and Training Specialists; Organizations, Parents and Individuals Concerned with Special Education; Head Start Directors; Team Leaders

FROM: **Lawrence Gloeckler**, Deputy Commissioner, Office of Vocational and Educational Services for Individuals with Disabilities
James A. Kadamus, Deputy Commissioner, Office of Elementary, Middle, Secondary and Continuing Education
Johanna Duncan-Poitier, Deputy Commissioner, Office of the Professions

SUBJECT: Questions and Answers on *The Provision of Nursing Tasks and Health-Related Activities in the School Setting for Students with Special Health Care Needs*

In March 1995, the Department disseminated a memorandum entitled, *The Provision of Nursing Tasks and Health-Related Activities in the School Setting for Students with Special Health Care Needs*, which provided information on nursing tasks and health-related activities associated with children with special health care needs in school settings. The memorandum also provided guidance and clarification on implementing existing laws and regulations concerning the provision of health services to all children in schools and assisted boards of education in developing policies on nursing and health-related care to any children with special health needs. Sample lists of functions that must be performed by nurses were provided, as well as those that may be assigned to appropriately trained school personnel. This memorandum, provided in a question-and-answer format, clarifies issues that have arisen related to the March 1995 memorandum.

If you have questions about this document, you may call:

- Comprehensive Health and Pupil Services Team (518) 486-6090
- Office of the State Board for Nursing (518) 474-3845
- Office for Special Education Policy and Quality Assurance (518) 473-2878
- Statewide Advocacy for School Health Services (716) 349-7630

Frequently Asked Questions

About Roles and Responsibilities in Relation to Nursing Procedures and Health-related Activities for All Children in the School Setting

1. What is the citation in law that indicates that only nurses can perform nursing tasks/administer medications to non-self-directed students?

Section 6902.1 of Article 139 of the Education Law (The Nurse Practice Act) states that only registered professional nurses may execute medical regimens. Section 6902.2 defines that licensed practical nurses may perform tasks and responsibilities only when under the direction of a registered professional nurse or other authorized health care provider. The State Education Department has determined that the administration of medication is a protected task under the Nurse Practice Act. The only exceptions to that rule are exemptions in the Nurse Practice Act, Section 6908.1, related to the care of individuals in the home by family members or their designees, and other licensed professionals, e.g., medicine, etc.

2. May a school district apply for a variance from the requirements of the Nurse Practice Act?

No. School districts should examine existing policies, procedures and practices to ensure compliance with the Nurse Practice Act. Questions regarding compliance with the Act can be directed to the New York State Board for Nursing.

3. Does the Nurse Practice Act apply to preschool programs, day care centers, summer programs, residential programs, and camp programs?

Yes. The Nurse Practice Act applies to any setting where a nurse practices and in situations in which preschool and school-age students require nursing care except for exemptions granted for certain residential settings. The March 1995 memorandum specifically applies to all educational settings that provide services to preschool and school-age students. In other settings, such as day care programs, residential centers, and summer recreational programs, personnel should check with administrators of the program to determine how compliance with the Nurse Practice Act is implemented.

4. What provision in law prohibits Licensed Practical Nurses (LPNs) from being employed as school nurses?

Section 902 of Education Law allows boards of education to employ one or more school nurses, who **shall be** registered professional nurses (RNs) legally qualified to practice nursing in this State.

5. Can a Licensed Practical Nurse (LPN) who has completed requirements to become a registered professional nurse (RN), but is awaiting licensure, practice as a school nurse?

No. Such an individual must continue to practice as a LPN until the RN license has been issued.

6. Can a LPN provide school health services as long as supervision is provided?

Yes. LPNs may be hired to perform nursing tasks permitted in the LPN scope of practice under the direction of a school nurse, physician or dentist. The tasks must be part of an individual nursing care plan that is developed, maintained and evaluated by a school nurse. Direction does not necessarily need to be on site, but evidence of adequate supervision (which must include, at a minimum, availability of the school nurse, physician or dentist by telephone) is essential.

7. Can a LPN be hired as a health aide in a district which does not employ school nurses?

Yes, a LPN can be hired as a health aide in a district which does not employ school nurses.

However, this individual may perform only those duties within the job description of a health aide consistent with the appendices of the March 1995 memo. It is further recommended that health aides function under the supervision of licensed health services personnel.

8. What is the minimum criteria for considering a student to be self-directed?

Determination as to whether a student should be considered self-directed should be based on the student's cognitive and/or emotional development rather than age or grade. Factors such as age of reason and mental/emotional disability are some additional considerations to be looked at in determining a child's ability to be self-directed. Usually a student may be considered to be self-directed if he/she is consistently able to do all of the following:

- Identify the correct medication (e.g., color, shape)
- Identify the purpose of the medication (e.g., to improve attention)
- Determine that the correct dosage is being administered (e.g., one pill)
- Identify the time the medication is needed during the school day (e.g., lunch time, before/after lunch)
- Describe what will happen is medication is not taken (e.g., unable to complete school work)
- Refuse to take medication, if student has any concerns about its appropriateness

Student individualized health care plans should always address ways to make the student more independent in the management of their health needs. Goals should be established that will enable children to become self-directed regardless of age or grade.

9. How should school districts handle the issue of medications when students go on field trips or participate in after-school activities?

Most students are or can be taught to be self-directed in administering their own medications. To the extent appropriate, the school nurse should assist students to attain the goal of becoming self-directed in the administration of their own medication. For procedures addressing the administration of medication, refer to the State Education Department's guidelines, Administration of Medications in Schools. For field trips or after-school activities, teachers or other school staff should carry the self-directed student's medication so the student can take his/her own medication at the appropriate time.

For students who are not self-directed:

- The parent or guardian may attend the activity and administer the medication; or
- The parent can **personally** request another adult **who is not employed by the school** to voluntarily administer the medication on the field trip and inform the school district in writing of such request; or
- The student's health care provider can be consulted and may order the medication time to be adjusted or the dose eliminated.

If no other alternative can be found, the medication must be administered by a licensed professional (i.e., school nurse, LPN, substitute school nurse, physician) employed by the district. A child may not be prevented from participating in an educational activity, such as field trip, solely on the basis of a special health need.

10. How should school districts handle the need for nursing procedures when students go on field trips or participate in after-school activities?

When a student is unable to perform a necessary health-related task independently and the task is a nursing procedure as defined in Attachment A of the March 1995 memorandum, the parent, guardian, or volunteer

acting at the request of the parent or an appropriately licensed person provided by the district must perform the health-related task. If the student is considered to be self-directed, but is unable to perform the treatment because of physical limitations, a person, assessed by the school nurse as appropriately skilled in the performance of that particular treatment, may assist the student who directs the procedure in any or all of the steps required to complete the procedure.

11. What if nurses are not available to substitute for a school nurse where there are students with special health needs who are not self-directed?

A district must provide appropriately licensed personnel to provide necessary nursing services. This can be accomplished by reassigning nursing staff from other sites within the district, contracting with neighboring school districts or BOCES, contracting with nurses employed by outside agencies, or by actively recruiting an adequate nursing staff to serve as substitutes. If students who are not self-directed require nursing services and attend non-public schools, arrangements may need to be made by the public school for a nurse to be available to provide those services. Non-public school students must receive services comparable to those provided to public school students. A formal agreement between the public school district and the non-public school should address the issue of a substitute nurse to cover for a school nurse who is absent.

12. Must all children with special health needs have an individualized health care plan (IHP)?

An IHP, a plan of medical care for a child with health needs, is not required by law, but is customarily used in nursing practice and is recommended for all students with special health needs. Schools are eligible to receive Medicaid reimbursement for skilled nursing services for Medicaid eligible students only if an IHP is a part of a student's cumulative health record and such services are included in the students' individualized education plan (IEP – an educational plan for students who have been identified by the Committee on Special Education as having a disability). More detailed information about the requirements for Medicaid reimbursement are included in question 30 of this memo and in the August 1995 Department field memo, Updates and Clarification on the Current Medicaid Payment Process and Implementation of Procedures for Medicaid Reimbursement for School Supportive Health Services, available from the Office for Vocational and Educational Services for Individuals with Disabilities (VESID).

13. When a preschool program is located in a public school building, is the school nurse responsible for providing health services to the preschool children enrolled in such program?

If a preschool program is operated by the public school district, the school nurse is responsible for providing health services unless other coverage has been arranged. When private agencies are renting space in a public school building, the school nurse is not responsible for providing health services.

14. How does a district determine the appropriate nursing services that should be provided to students enrolled in a non-public school?

If the school district in which the non-public school is located provides school health services in the public school, equitable services, based on school population and health needs of the children attending the school, must be provided if the non-public school requests these services. This would include the provision of health-related tasks for students. Guidelines for a public school providing health services to students enrolled in a non-public school are addressed in the Handbook on Services to Pupils Attending Non-public Schools. This document is available from the State Education Department's Non-public School Services Team, Albany, New York 12234.

15. Are school districts authorized to employ Emergency Medical Technicians (EMTs) to provide health care to children with special health needs?

No. The definitions of services that may be provided by EMT's allows these individuals to function as EMTs only when they are working as members of ambulance crews where they are provided with supervision by a physician or mid-level practitioner through online radio or telephone contact. An EMT may not be hired to provide nursing procedures to children with special health needs. An EMT who has been hired as a health aide, if appropriately trained and supervised, may perform health-related activities as defined in Attachments B and C of the March 1995 memorandum.

16. Why is the provision of certain nursing procedures, such as catheterization, gastrostomy feedings, etc., delegated to non-nurses in some states, but not in New York State?

The practice of nursing is defined by each state's laws and regulations. In New York State, the Nurse Practice Act prohibits the delegation of nursing tasks to any unlicensed person in any setting. Procedures such as catheterization have been defined as nursing tasks in New York State.

17. If a non-licensed individual takes a course that certifies him/her to give medications in the home, can that person give medications in the school setting?

No. The exemption does not apply to educational settings.

18. Can a non-licensed person, who receives appropriate training, assist students with medications?

Only if the student has been assessed to be self-directed. An appropriately qualified individual may assist that child in any or all of the steps required to complete the procedure.

19. Can the school nurse provide training to non-licensed persons to administer injectable medications (epinephrine, glucagon) in anticipation of an emergency?

A non-licensed person may be trained by a registered professional nurse to administer injectable medications only in anticipation of dealing with emergency or life-threatening situations which may occur.

20. If parents and family representatives are trained to do nursing procedures at home, can non-nurses be trained to do them in the school setting?

Laws governing the practice of nursing have been written to protect the public. Procedures that are defined as nursing tasks (Attachment A of the March 1995 memorandum), although performed routinely, are not innocuous, and require nursing knowledge, judgment and skill. In New York State, under Section 6908.1 (i) of Education Law, family members may provide home nursing care to other family members and home health aides to perform nursing tasks for a self-directed individual. This exemption under Section 6908.1 (i) of Education Law does not, however, empower families to extend that right to individuals who are employed in educational settings. Schools, as public institutions, may only perform functions authorized by law and regulation.

21. What is the district's responsibility for ensuring that a school nurse has received appropriate training if he/she does not know how to perform certain procedures that a child will need? What is the nurse's responsibility?

It is the board of education's responsibility to ensure that staff, including nursing staff, is adequately trained and has updated skills. It is the registered nurse's responsibility to recognize that additional training is needed to perform a particular procedure and to help determine where the

appropriate training can be obtained. Procedures to provide for the appropriate training and direction for any individual who receives health-related services should be included in the school district policies and procedures.

22. Who is responsible for supplying special equipment/supplies for students with special health needs?

In most circumstances, the family is responsible for providing any special supplies and/or equipment for students that have special health needs. If equipment and/or supplies are included in a student's IEP or accommodation plan, pursuant to Part 200 of the Regulations of the Commissioner of Education or Section 504 or the Rehabilitation Act of 1973, respectively, it may be appropriate for the district to provide the necessary equipment/supplies so that a student can benefit from his/her educational program. Such a decision would be made by the Committee on Special Education or the multidisciplinary team pursuant to Section 504.

23. Do all children with tracheostomies, ventilators or other medical technology need a 1:1 nurse?

No. The health needs of such children must be assessed by the school nurse or other appropriate school medical personnel. The level of nursing care required and the amount of nursing time necessary to ensure the health and safety of such children in the school setting would be determined by the school district's multidisciplinary team or the Committee on Special Education with medical and/or nursing input as appropriate. If it is determined that a child's health needs can be appropriately met by the district's school nurse, a 1:1 nurse may not be necessary.

24. What procedures should be followed when a nurse working in a school building is employed by another agency (i.e., private duty nurse for a child with special health needs, a BOCES employed nurse who may have responsibility for a single class or group of classes)?

Procedures that govern health care for students, including care provided by nurses from outside agencies, should be established by school district policy. Procedures should address situations where: 1) there is a school nurse in the building; 2) there is a school nurse in the district; and 3) there is no school nurse. Provision of the following information/documents related to such arrangements would include:

For the Nurse Assigned:

- Copies for the agency of the nurse's current New York State license, the name and limitation of liability and workers' compensation insurance and New York State Medicaid provider number if appropriate.

For the Student:

- Copy of pertinent medical records, including health history and complete emergency data with relevant emergency phone numbers;
- Private health care provider's orders and medical management protocol for the child;
- Individualized health care plan for the student; and
- Consent form signed by parent/guardian that will allow the agency nurse and the school nurse to share information reciprocally.

These documents should be reviewed by the school physician or designee and be updated by the agency periodically.

The agency nurse and the school nurse should work together to develop a plan to assure that the student's health needs will be met (i.e., an emergency). However, the school nurse should never be expected to substitute for the agency nurse in providing constant care of the student or to supervise a nurse who is not employed by the district.

Agency nurses should be expected to abide by the health and administrative policies of the district (i.e., notification to the school nurse or administrator when in the building, evacuation and emergency procedures, etc.). Procedures should be established for the school nurse to follow if the school nurse determines that an agency nurse is performing a procedure in an unsafe way. Agency nurses assigned to care for a specific student should not be expected to substitute for the school nurse.

25. What is a school district's responsibility to provide school health services for students with disabilities who participate in nonacademic and extracurricular activities?

Section 504 of the Rehabilitation Act of 1993 and the Individuals with Disabilities Education Act require school districts to ensure that students with disabilities have an equal opportunity to participate in nonacademic and extracurricular activities which are available to other students enrolled in the public schools of the district. To ensure the participation of students with special health needs in these activities, school districts must make available appropriate health services to these students. Procedures included in the March 1995 memorandum apply to the provision of health services in these situations.

26. What if an unlicensed person is not willing to perform a health-related task to which he/she has been assigned?

Assignment of health-related tasks should be consistent with the job description of the person assigned to perform them, should not interfere with the person's ability to perform other assigned duties and should not be in conflict with the terms of applicable collective bargaining agreements. An employee's willingness to perform a health-related task should be considered. Employees who volunteer should be assigned in the first instance,since an individual who is voluntarily performing a task is more likely to accept and execute the responsibility in a way that is safe and beneficial for a child. Effort should be made to determine why an individual is unwilling to perform a task. There may be instances where it will be necessary for an administrator to insist that an unwilling person who is otherwise qualified must perform a health-related task which they are legally permitted to perform.

27. Where can districts access training information and resources to assist in the implementation of the requirements of the March 1995 memorandum?

The statewide network of Special Education and Training Resource Centers (SETRC), BOCES LPN preparation programs and School of Nursing may be able to sponsor training programs for those who are being asked to perform health-related tasks. The Statewide Advocacy for School Health Services (SASHS) Office and the Comprehensive Health & Pupil Services (CHAPS) Team at the New York State Education Department can provide information about school health services and resources. BOCES School Library Systems can access intra-library loans so that appropriate training materials, which are not available in a particular locale, can be accessed.

28. Is additional funding available to schools for the provision of health services for students with disabilities?

As cited in the August 1995 Department memo, *Updates and Clarification on the Current Medicaid Payment Process and Implementation of Procedures for Medicaid Reimbursement for School Supportive Services*, school may access Medicaid funds for skilled nursing services provided to Medicaid eligible students with disabilities. Reimbursable nursing services are health care activities provided pursuant to a child's IEP and include medical treatments and procedures and health assessments. Medical treatments and procedures include, but are not limited to, activities related to feeding, care of ostomies, respiratory treatments, catheterization, administration of medications, medical support to a child, collection of specimens and other nursing procedures. Health assessment includes collection, documentation and analysis of data, development and implementation of individualized health care plans and periodic evaluation of the plans. The memo provides more detail about the activities and how to access Medicaid funding and is available for VESID.

Prescription Medication Order and Permission to Administer Medication and to Test Blood Sugar Form

(To be returned to the school nurse)

From time to time, it may be necessary for your child to take prescription medicine for treatment of an illness. Medicines that are ordered to be taken less than 4 times a day can and should be taken at home. However, if medicine must be taken 4 times a day, or at a specific time scheduled during school hours, the school nurse, as mandated by state law, may dispense medications **ONLY WITH THE FOLLOWING:**

1. Medication order, signed by the physician
2. Parental authorization, signed by the parent
3. Original pharmacist labeled bottle

MEDICATION ORDER

Student: _____ Date of Birth: ____ / ____ / ____

Medication: _____

Directions: _____

Reason for giving: _____

Date: ____ / ____ / ____ Telephone number of physician: _____

_____

(Signature of Physician)

PERMISSION TO ADMINISTER

Date: ____ / ____ / ____ I hereby give my permission for _____ to take the above prescription at school as directed.

_____

(Signature of Parent/Guardian)

PERMISSION TO TEST BLOOD SUGAR LEVEL

Date: ____ / ____ / ____ I grant permission for the school nurse to test my child's blood sugar level at school during a crisis or emergency situation.

_____

(Signature of Parent/Guardian)

Date: ____ / ____ / ____ I grant permission for the school nurse to test this child's blood sugar level during a crisis or emergency situation.

_____

(Signature of Physician)

Adapted from Vermont Manual — Recommendations for Management of Diabetes for Children in School

Medical Statement for Children Requiring Modification of School Meals

Name of Student: _____ Birth date: _____

Name of Parent/Guardian: _____ Daytime Phone: _____

Disability or Medical Condition requiring modification of school meals: _____

Major life activity affected by student's disability (please check all that apply):

☐ caring for one's self ☐ eating ☐ performing manual tasks ☐ walking ☐ seeing
☐ hearing ☐ speaking ☐ breathing ☐ learning ☐ working

Required Meal Modification (check all which apply):

☐ **Restricted Nutrient**	☐ **Increased Nutrient**	☐ **Modified Texture**
☐ Calorie ☐ Controlled Carbohydrate ☐ Protein ☐ Sodium ☐ Fat/Cholesterol	☐ Calorie ☐ Protein ☐ Fiber ☐ Other	Describe required modification: _____ _____ _____ _____

☐ Foods to be omitted from the diet	
List all that apply:	Foods that may be substituted:

Special Utensils Needed: _____

Tube Feeding Required: _____

Other Accommodations needed: _____

For student with a disability: Signature of Physician: _____ Date: _____

For non-disabled student: Signature of Other Medical Authority: _____ Date: _____

Adapted from Vermont Manual — Recommendations for Management of Diabetes for Children in School

Sample Student Accommodation Plan

Student Name: _____ DOB: _____ Grade: _____

Case Manager: _____ School: _____

Date of Meeting: _____ / _____ / _____

1. Describe the nature of the concern:

   Type 1 diabetes

2. Describe the basis for the determination of disability:

   Type 1 diabetes is a physiological disorder that affects the endocrine system.

3. Describe how the disability affects a major life activity:

   The student is at risk for hypoglycemic and hyperglycemic episodes related to her/his metabolic dysfunction.

4. Describe the reasonable accommodations that are necessary:

   - *Perform or receive assistance with blood glucose monitoring*
   - *Treat or receive assistance with treatment of hypoglycemic episodes (glucose and or Glucagon as prescribed)*
   - *Treat or receive assistance with treatment of hyperglycemic episodes (inject insulin if ordered and drink water)*
   - *Eat whenever and wherever necessary*
   - *Have free and unrestricted access to water and the bathroom*
   - *Participate fully in physical education (gym class) and other extracurricular activities, including field trips.*

Review/Reassessment Date: ____ / ____ / ____

Participants (name and title): _____

Adapted from Vermont Manual — Recommendations for Management of Diabetes for Children in School

Sample — 504 Plan for the School Year 97/98

Student Name: _____ Date of Birth: _____ Grade: _____

Case Manager: _____ Date of Disability Determination:: _____

Area of disability that "substantially limits a major life activity"
Description of how this disability limits a major life activity

- Mary has Type 1 diabetes mellitus. This is a condition in which the pancreas is unable to make insulin. Without insulin, the body cannot change glucose (sugar) into the energy a person needs. To compensate for the lack of natural insulin, she must take daily insulin injections, usually at home but sometimes in school.
- Mary's daily insulin injections must be balanced with her meals, snacks and regular physical activity. To consistently achieve this balance, she must eat daily snacks and meals on a regular schedule. During the school day she must check her blood sugar before lunch, and physical education class, as well as when her body tells her blood sugar is low or too high.
- While Mary is achieving independence in self-management of her diabetes, the adults who work with her will need to be supportive and understanding about the daily regimen. Her self-care needs will be integrated into the school day so there are minimal interruptions in the learning environment.
- Mary is generally responsible and independent about her blood sugar tests, diet, and necessary equipment. The adults in the school community will help by reminding Mary to bring her pack on all out-of-school trips and to keep it with her when she is away from the classroom for extended periods of time. Mary will need this reminder especially before special events.
- Mary's blood sugar levels affect the way she learns.
- Mary's behavior is related to blood sugar levels. She can feel "racy" and excited when her blood sugar is high, tired and "spacey" when it is low.
- When Mary is excited and/or stressed as in a testing situation, her blood sugar can potentially go up. When her blood sugar is high (over 200) her body responds by trying to decrease this sugar level. She may become thirstier as her body is acting to dilute or flush out the extra sugar. She needs to drink more water and then urinate more frequently.
- The learning environment is altered when Mary must stop an activity to test her blood sugar, go to the bathroom, eat a snack or get a drink of water.
- Mary must continuously remind herself to monitor her blood sugar at appropriate times, to eat/exercise regularly and to bring supplies with her. This self-monitoring is a big task and is a distraction in itself.

Adapted from Vermont Manual — Recommendations for Management of Diabetes for Children in School

1999 Quick Reference Guide To The American Diabetes Association's Standards of Care

PHYSICAL ASSESSMENT

Visits: Continuing care visits every three months are appropriate to meet patient's needs and treatment goals

Blood Pressure: Every continuing care visit. Goal is <130/85. **

Comprehensive Foot Exam (adults): At least yearly (more often in patients with high-risk foot conditions).

Eye Exam: Yearly dilated funduscopic exam (or retinal photography); if diagnosed at age 29 or earlier, the initial eye exam should be performed within 3-5 years of diagnosis once patient is age 10 or older.

LABORATORY TESTS

HbA1c (hemoglobin A1c blood test): Every three months if continuing care visits show goals are not being met. Adjust goals to prevent serious hypoglycemia. Target goal is <1% above upper limit of normal (e.g. <7.0% for a HbA1c assay with an upper limit of normal of 6%). A value of >2% e.g., >8% for HbA1c) above upper limit of normal requires greater attention. **

Urine Protein (adults): Yearly dipstick for proteinuria; if negative, evaluate for microalbuminuria.

Lipid Profile (adults): Yearly. Target goals **: total cholesterol and triglycerides <200 mg/dl, LDL-C <100 mg/dl, HDL-C >35 mg/dl in men and >45 mg/dl in women.

SELF-MANAGEMENT TRAINING

General Principles: Review goals at every continuing care visit. Conduct comprehensive assessment yearly to include patient's understanding of diabetes self-monitoring of blood glucose (SMBG), acute and chronic complications.

Medical Nutrition Therapy: Review goals at every continuing care visit. Conduct comprehensive assessment yearly to include meal planning, reading food labels, weight control.

SMBG: Should be performed as appropriate to meet goals.

Physical Activity: Review goals at every continuing care visit. Conduct comprehensive assessment yearly to include frequency and duration of activity and physical limitations.

SPECIAL SITUATIONS

Hypoglycemia: Recurrent hypoglycemia calls for reassessment of treatment plan. Additional action suggested might include enhanced diabetes self-management education, co-management with a diabetes team, referral to an endocrinologist, change in pharmacological therapy, initiation or increased SMBG, or more frequent contact with the patient.

Preconception Counseling: Begin counseling at puberty; enhance counseling with adolescence; consult with high-risk perinatal program when appropriate.

Pregnancy Management: Intensify glycemic control; consult with high-risk perinatal programs when appropriate.

Smoking Cessation: Emphasize and assist as much as possible.

Aspirin Therapy: Enteric-coated aspirin (81-325 mg/day) as secondary prevention for CVD. Consider for primary prevention in high-risk patients (e.g., family history, smoking, hyperlipidemia, hypertension, albuminuria).

** These guidelines have been condensed from the American Diabetes Association's Standards of Medical Care for People with Diabetes. They do not reflect all the actions that should be provided by health professionals in the medical management of diabetes. Full text of the Association's Clinical Practice Recommendations, including the Standards of Medical Care, is available at www.diabetes.org.*

*** If the patient is not making satisfactory progress toward treatment goals within a reasonable period (3-6 months), medical management should be enhanced. Greater attention to self-management education, co-management with a diabetes team, referral to an endocrinologist, change in pharmacologic therapy, initiation of or increased SMBG, or more frequent contact with the patient, are examples of actions that should be considered.*

Care of Children With Diabetes in the School and Day Care Setting

AMERICAN DIABETES ASSOCIATION

Diabetes is one of the most common chronic diseases of childhood, with a prevalence of ~1.7 affected individuals per 1,000 people aged <20 years (1–4). In the U.S., ~13,000 new cases are diagnosed annually in children (4–7). There are about 125,000 individuals <19 years of age with diabetes in the U.S. (8). The majority of these young people attend school and/or some type of day care and need knowledgeable staff to provide a safe school environment (9–12). Both parents and the health care team should work together to provide school systems and day care providers with the information necessary to allow children with diabetes to participate fully and safely in the school experience.

DIABETES AND THE LAW

— Federal laws that protect children with diabetes include Section 504 of the Rehabilitation Act of 1973, the Individuals with Disabilities Education Act of 1991 (originally the Education for All Handicapped Children Act of 1975), and the Americans with Disabilities Act. Under these laws, diabetes has been considered to be a disability, and it is illegal for schools and/or day care centers to discriminate against children with disabilities. In addition, any school that receives federal funding or any facility considered open to the public must reasonably accommodate the special needs of children with diabetes. Indeed, federal law requires an individualized assessment of any child with diabetes. The required accommodations should be provided within the child's usual school setting with as little disruption to the school's and the child's routine as possible and allowing the child full participation in all school activities.

Despite these protections, children in the school and day care setting still face discrimination. For example, some day care centers may refuse admission to children with diabetes, and children in the classroom may not be provided the assistance necessary to monitor blood glucose and may be prohibited from eating needed snacks. The American Diabetes Association works to ensure the safe and fair treatment of children with diabetes in the school and day care setting (13–15).

Diabetes Care in Schools

Appropriate diabetes care in the school and day care setting is necessary for the child's immediate safety, long-term well being, and optimal academic performance. The Diabetes Control and Complications Trial showed a significant link between blood glucose control and the later development of diabetes complications, with improved glycemic control decreasing the risk of these complications (16,17). To achieve glycemic control, a child must monitor blood glucose frequently, follow a meal plan, and take medications. Insulin is usually taken in multiple daily injections or through an infusion pump. Crucial to achieving glycemic control is an understanding of the effects of physical activity, nutrition therapy, and insulin on blood glucose levels.

To facilitate the appropriate care of the student with diabetes, school and day care personnel must have an understanding of diabetes and must be trained in its management and in the treatment of diabetes emergencies. Knowledgeable trained personnel are essential if the student is to avoid the immediate health risks of low blood glucose and to achieve the metabolic control required to decrease risks for later development of diabetes complications. Studies have shown that the majority of school personnel have an inadequate understanding of diabetes and that parents of children with diabetes lack confidence in their teachers' ability to manage diabetes effectively (12,18,19). Consequently, diabetes education must be targeted toward day care providers, teachers, and other school personnel who interact with the child, including school administrators, school coaches, school nurses, health aides, bus drivers, secretaries, etc.

The purpose of this position statement is to provide recommendations for the management of children with diabetes in the school and day care setting.

GENERAL GUIDELINES FOR THE CARE OF THE CHILD IN THE SCHOOL AND DAY CARE SETTING

I. Diabetes Health Care Plan

An individualized Diabetes Health Care Plan should be developed by the parent/guardian, the student's diabetes care team, and the school or day care provider. Inherent in this process are delineated responsibilities assumed by all parties, including the parent/guardian, the school personnel, and the student. These responsibilities are outlined in this position statement. The Diabetes Health Care Plan should address the specific needs of the child and provide specific instructions for each of the following:

1. Blood glucose monitoring, including the frequency and circumstances requiring testing.
2. Insulin administration (if necessary), including doses/injection times prescribed for specific blood glucose val-

The recommendations in this paper are based on the evidence reviewed in the following publications: Diabetes Control and Complications Trial Research Group: The effect of intensive treatment of diabetes on the development and progression of long-term complications in insulin-dependent diabetes mellitus. *N Engl J Med* 329:977–986, 1993; and Diabetes Control and Complications Trial Research Group: The effect of intensive diabetes treatment on the development and progression of long-term complications in adolescents with insulin-dependent diabetes mellitus. *J Pediatr* 125:177–188, 1994.

The initial draft of this paper was prepared by Georgeanna Klingensmith, MD, Francine Kaufman, MD, Desmond Schatz, MD, and William Clarke, MD. The paper was peer-reviewed, modified, and approved by the Professional Practice Committee and the Executive Committee, November 1998. Most recent review/revision, 2000.

ues and the storage of insulin.
3. Meals and snacks, including food content, amounts, and timing.
4. Symptoms and treatment of hypoglycemia (low blood glucose), including the administration of glucagon if recommended by the student's treating physician.
5. Symptoms and treatment of hyperglycemia (high blood glucose).
6. Testing for ketones and appropriate actions to take for abnormal ketone levels, if requested by the student's health care provider.

Figure 1 includes a sample Diabetes Health Care Plan. For detailed information on the symptoms and treatment of hypoglycemia and hyperglycemia, refer to the *Medical Management of Type 1 Diabetes* (20). A brief description of diabetes targeted to school and day care personnel is included in the APPENDIX; it may be helpful to include this information as an introduction to the Diabetes Health Care Plan.

II. Responsibilities of the various care providers

A. The parent/guardian should provide the school or day care provider with the following:

1. All materials and equipment necessary for diabetes care tasks, including blood glucose testing, insulin administration (if needed), and urine ketone testing. The parent/guardian is responsible for the maintenance of the blood glucose testing equipment (i.e., cleaning and performing controlled testing per the manufacturer's instructions) and must provide materials necessary to ensure proper disposal of materials. A separate logbook should be kept at school with the diabetes supplies for the staff or student to record test results; blood glucose values should be transmitted to the parent/guardian for review as often as requested.
2. Supplies to treat hypoglycemia, including a source of glucose and a glucagon emergency kit, if indicated in the Diabetes Health Care Plan.
3. Information about diabetes and the performance of diabetes-related tasks.
4. Emergency phone numbers for the parent/guardian and the diabetes care team so that the school can contact these individuals with diabetes-related questions and/or during emergencies.
5. Information about the student's meal/snack schedule. The parent should work with the school to coordinate this schedule with that of the other students as closely as possible. For young children, instructions should be given for when food is provided during school parties and other activities.

B. The school or day care provider should provide the following:

1. Training to all adults who provide education/care for the student on the symptoms and treatment of hypoglycemia and hyperglycemia and other emergency procedures. An adult and back-up adult(s) trained to: *1*) perform fingerstick blood glucose monitoring and record the results; *2*) take appropriate actions for blood glucose levels outside of the target ranges as indicated in the student's Diabetes Health Care Plan; and *3*) test the urine or blood for ketones, when necessary, and respond to the results of this test.
2. Immediate accessibility to the treatment of hypoglycemia by a knowledgeable adult. The student should remain supervised until appropriate treatment has been administered, and the treatment should be available as close to where the student is as possible.
3. If indicated by the child's developmental capabilities and the Diabetes Health Care Plan, an adult and back-up adult(s) trained in insulin administration.
4. An adult and back-up adult(s) trained to administer glucagon, in accordance with the student's Diabetes Health Care Plan.
5. A location in the school to provide privacy during testing and insulin administration, if desired by the student and family, or permission for the student to check his or her blood glucose level and to take appropriate action to treat hypoglycemia in the classroom or anywhere the student is in conjunction with a school activity, if indicated in the student's Diabetes Health Care Plan.
6. An adult and back-up adult(s) responsible for the student who will know the schedule of the student's meals and snacks and work with the parent/guardian to coordinate this schedule with that of the other students as closely as possible. This individual also will notify the parent/guardian in advance of any expected changes in the school schedule that affect the student's meal times or exercise routine. Young children should be reminded of snack times.
7. Permission for the student to see school medical personnel upon request.
8. Permission for the student to eat a snack anywhere, including the classroom or the school bus, if necessary to prevent or treat hypoglycemia.
9. Permission to miss school without consequences for required medical appointments to monitor the student's diabetes management. This should be an excused absence with a doctor's note, if required by usual school policy.
10. Permission for the student to use the restroom and have access to fluids (i.e., water) as necessary.
11. An appropriate location for insulin and/or glucagon storage, if necessary.

An adequate number of school personnel should be trained in the necessary diabetes procedures (e.g., blood glucose monitoring, insulin and glucagon administration) and in the appropriate response to high and low blood glucose levels to ensure that at least one adult is present to perform these procedures in a timely manner while the student is at school, on field trips, and during extracurricular activities or other school-sponsored events. These school personnel need not be health care professionals.

The student with diabetes should have immediate access to diabetes supplies at all times, with supervision as needed. Provisions similar to those described above must be available for field trips, extracurricular activities, other school-sponsored events, and on transportation provided by the school or day care facility to enable full participation in school activities.

It is the school's legal responsibility to provide appropriate training to school staff on diabetes-related tasks and in the treatment of diabetes emergencies. This training should be provided by health care professionals with expertise in diabetes unless the student's health care provider determines that the parent/guardian is able to provide the school personnel with sufficient oral and written information to allow the school to have a safe and appropriate environment for the child. If appropriate, members of the health care team should provide instruction and materials to the parent/guardian to facilitate the education of school staff. Educational materials from the American Diabetes

Diabetes Care Plan for _____ **(name of student)** _____ **School** _____ **Effective Dates:** _____
To be completed by parents/health care team and reviewed with necessary school staff. Copies should be kept in student's classrooms and school records.

Date of Birth: _____ **Grade:** _____ **Homeroom Teacher:** _____

Contact Information:
Parent/guardian #1: _____ Address: _____
Telephone - Home: _____ Work: _____ Cell Phone: _____
Parent/guardian #2: _____ Address: _____
Telephone - Home: _____ Work: _____ Cell Phone: _____
Student's Doctor/Health Care Provider: _____ Telephone: _____
Nurse Educator: _____ Telephone: _____
Other emergency contact: _____ Relationship: _____
Telephone - Home: _____ Work: _____ Cell Phone: _____
Notify parent/guardian in the following situations: _____

Blood Glucose Monitoring
Target range for blood glucose: _____ mg/dl to _____ mg/dl
Type of blood glucose meter student uses: _____
Usual times to test blood glucose: _____
Times to do extra tests (check all that apply):
_____ Before exercise
_____ After exercise
_____ Other (explain): _____
_____ When student exhibits symptoms of hyperglycemia
_____ When student exhibits symptoms of hypoglycemia
Can student perform own blood glucose tests? Yes No Exceptions: _____
School personnel trained to monitor blood glucose level and dates of training: _____

Insulin
Times, types, and dosages of insulin injections to be given during school:

Time	Type(s)	Dosage
_____	_____	_____
_____	_____	_____
_____	_____	_____

School personnel trained to assist with insulin injection and dates of training: _____
Can student give own injections? Yes No
Can student determine correct amount of insulin? Yes No
Can student draw correct dose of insulin? Yes No

For Students with Insulin Pumps:
Type of pump: _____
Insulin/carbohydrate ratio: _____
Correction factor: _____
Is student competent regarding pump? Yes No
Can student effectively troubleshoot problems (e.g., ketosis, pump malfunction)? Yes No
Comments: _____

Meals and Snacks Eaten at School (The carbohydrate content of the food is important in maintaining a stable blood glucose level.)

	Time	Food content/amount
Breakfast	_____	_____
A.M. snack	_____	_____
Lunch	_____	_____
P.M. snack	_____	_____
Dinner	_____	_____

Snack before exercise? Yes No _____
Snack after exercise? Yes No _____
Other times to give snacks and content/amount: _____
A source of glucose, such as _____, should be readily available at all times.
Preferred snack foods: _____
Foods to avoid, if any: _____
Instructions for when food is provided to the class, e.g., as part of a class party or food sampling: _____

Hypoglycemia (Low Blood Sugar)
Usual symptoms of hypoglycemia: _____
Treatment of hypoglycemia: _____
School personnel trained to administer glucagon and dates of training: _____
Glucagon should be given if the student is unconscious, having a seizure (convulsion), or unable to swallow. If required, glucagon should be administered promptly and then 911 (or other emergency assistance) and parents should be called.

Hyperglycemia (High Blood Sugar)
Usual symptoms of hyperglycemia: _____
Treatment of hyperglycemia: _____
Circumstances when urine ketones should be tested: _____
Treatment for ketones: _____

Exercise and Sports
A snack such as _____ should be readily available at the site of exercise or sports.
Restrictions on activity, if any: _____
Student should not exercise if blood glucose is below _____ mg/dl.

Supplies and Personnel
Location of supplies: Blood glucose monitoring equipment: _____ Insulin administration supplies: _____
Glucagon emergency kit: _____ Ketone testing supplies: _____
Snack foods: _____
Personnel trained in the symptoms and treatment of low and high blood sugar and dates of training: _____

Signatures
Reviewed by: [student's health provider/ date] Acknowledged/received by: [guardian/date] Acknowledged/received by: [school representative/date]

Figure 1—*Diabetes Health Care Plan.*

Table 1— *Resources for teachers, child care providers, parents, and health professionals*

Children with Diabetes: Information for Teachers & Child-Care Providers, Alexandria, VA, American Diabetes Association, 1999 (brochure); available online at www.diabetes.org/ada/teacher.asp.
Your School & Your Rights: Protecting Children with Diabetes Against Discrimination in Schools and Day Care Centers, Alexandria, VA, American Diabetes Association, 2000 (brochure); available online at www.diabetes/org/ada/scrights.asp.*
Your Child Has Type 1 Diabetes: What You Should Know, Alexandria, VA, American Diabetes Association, 1999 (brochure); available online at www.diabetes.org/advocacy/type1.asp.*
Treating Diabetes Emergencies: What You Need to Know, Alexandria, VA, American Diabetes Association, 1995 (video); 1-800-232-6733.
Complete Guide to Diabetes, Alexandria, VA, American Diabetes Association, 1999; 1-800-232-6733.
Raising a Child with Diabetes: A Guide for Parents, Alexandria, VA, American Diabetes Association, 2000; 1-800-232-6733.
Clarke W "Advocating for the Child with Diabetes," *Diabetes Spectrum* 12:230–236, 1999.
Education Discrimination Resources List, Alexandria VA, American Diabetes Association, 2000.*
Wizdom: A Kit of Wit and Wisdom for Kids with Diabetes (and their parents), Alexandria, VA, American Diabetes Association, 2000. Order information and select resources available at www.diabetes.org/wizdom.
The Care of Children with Diabetes in Child Care and School Setting (video); available from, Managed Design, Inc., P.O. Box 3067, Lawrence, KS 66046. (785) 842-9088.
Fredrickson L, Griff M: *Pumper in the School, Insulin Pump Guide for School Nurses, School Personnel and Parents. MiniMed Professional Education, Your Clinical Coach. First Edition, May 2000.* MiniMed, Inc., 1-800-440-7867.
Tappon D, Parker M, Bailey W: *Easy As ABC, What You Need to Know About Children Using Insulin Pumps in School.* Disetronic Medical Systems, Inc., 1-800-280-7801.

*These documents are available in the American Diabetes Association's Education Discrimination Packet by calling 1-800-DIABETES.

Association and other sources targeted to school personnel and/or parents are available. Table 1 includes a listing of appropriate resources.

III. Expectations of the student in diabetes care

Children and youths should be able to implement their diabetes care at school with parental consent to the extent that is appropriate for the student's development and his or her experience with diabetes. The extent of the student's ability to participate in diabetes care should be agreed upon by the school personnel, the parent/guardian, and the health care team, as necessary. The ages at which children are able to perform self-care tasks are very individual and variable, and a child's capabilities and willingness to provide self-care should be respected.

1. *Preschool and day care.* The preschool child is usually unable to perform diabetes tasks independently. By 4 years of age, children may be expected to generally cooperate in diabetes tasks.
2. *Elementary school.* The child should be expected to cooperate in all diabetes tasks at school. By age 8 years, most children are able to perform their own fingerstick blood glucose tests with supervision. By age 10, some children can administer insulin with supervision.
3. *Middle school or junior high school.* The student should be able to administer insulin with supervision and perform self-monitoring of blood glucose under usual circumstances when not experiencing a low blood glucose level.
4. *High school.* The student should be able to perform self-monitoring of blood glucose under usual circumstances when not experiencing low blood glucose levels. In high school, adolescents should be able to administer insulin without supervision.

At all ages, individuals with diabetes may require help to perform a blood glucose test when the blood glucose is low. In addition, many individuals require a reminder to eat or drink during hypoglycemia and should not be left unsupervised until such treatment has taken place and the blood glucose value has returned to the normal range.

MONITORING BLOOD GLUCOSE IN THE CLASSROOM — It is best for a student with diabetes to obtain a blood glucose level and to respond to the results as quickly and conveniently as possible. This is important to avoid medical problems being worsened by a delay in testing/treatment and to minimize educational problems caused by missing instruction in the classroom. Accordingly, as stated earlier, a student should be permitted to monitor his or her blood glucose level and take appropriate action to treat hypoglycemia in the classroom or anywhere the student is in conjunction with a school activity, if preferred by the student and indicated in the student's Diabetes Health Care Plan. However, some students desire privacy during testing and this preference should also be accommodated.

In summary, with proper planning and the education and training of school personnel, children and youth with diabetes can fully participate in the school experience. To this end, the family, the health care team, and the school should work together to ensure a safe learning environment.

APPENDIX: BACKGROUND INFORMATION ON DIABETES FOR SCHOOL PERSONNEL

— Diabetes is a serious, chronic disease that impairs the body's ability to use food. Insulin, a hormone produced by the pancreas, helps the body convert food into energy. In people with diabetes, either the pancreas does not make insulin or the body cannot use insulin properly. Without insulin, the body's main energy source—glucose—cannot be used as fuel. Rather, glucose builds up in the blood. Over many years, high blood glucose levels can cause damage to the eyes, kidneys, nerves, heart, and blood vessels.

The majority of school-aged youth with diabetes have type 1 diabetes. People with type 1 diabetes do not produce insulin and must receive insulin through either injections or an insulin pump. Insulin taken in this manner does not cure diabetes and may cause the student's blood glucose level to become dangerously low. Type 2 diabetes, the most common form of the disease typically afflicting obese adults, has been shown to be increasing in youth (21). This may be due to the increase in obesity and decrease in physical activity in young people. Students with type 2 diabetes may be

able to control their disease through diet and exercise alone or may require oral medications and/or insulin injections. All people with type 1 and type 2 diabetes must carefully balance food, medications, and activity level to keep blood glucose levels as close to normal as possible.

Low blood glucose (hypoglycemia) is the most common immediate health problem for students with diabetes. It occurs when the body gets too much insulin, too little food, a delayed meal, or more than the usual amount of exercise. Symptoms of mild to moderate hypoglycemia include tremors, sweating, lightheadedness, irritability, confusion, and drowsiness. A student with this degree of hypoglycemia will need to ingest carbohydrates promptly and may require assistance. Severe hypoglycemia, which is rare, may lead to unconsciousness and convulsions and can be life-threatening if not treated promptly.

High blood glucose (hyperglycemia) occurs when the body gets too little insulin, too much food, or too little exercise; it may also be caused by stress or an illness such as a cold. The most common symptoms of hyperglycemia are thirst, frequent urination, and blurry vision. If untreated over a period of days, hyperglycemia can cause a serious condition called diabetic ketoacidosis (DKA), which is characterized by nausea, vomiting, and a high level of ketones in the blood and urine. For students using insulin infusion pumps, lack of insulin supply may lead to DKA more rapidly. DKA can be life-threatening and thus requires immediate medical attention.

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Additional Diabetes Links

About Diabetes –
Basic diabetes care information
http://www.diabetes.com/ABOUT.HTM

American Diabetes Association –
An organization devoted to diabetes cures & cares
http://www.diabetes.org/default.asp

Amputation Prevention –
Diabetic foot care information
http://www.noah.cuny.edu/diabetes/diabetes.html

Center for Food Safety & Applied Nutrition –
Nutritional Information
http://vm.cfsan.fda.gov/

Centers for Disease Control –
Diabetes and Public Health Resource
http://www.cdc.gov/nccdphp/ddt/ddthome.htm

Children with Diabetes –
Issues for diabetic children
http://www.childrenwithdiabetes.com/

Naomi-Berrie Diabetes Treatment Center –
Columbia-Presbyterian Hospital
http://cpmcnet.columbia.edu/dept/diabetes/

Curediabetes –
Diabetes endocrinological information
http://www.curediabetes.org/index.html

Diabetes and Periodontal Disease –
Diabetes and gum disease information
http://www.nidr.nih.gov/pubs/diabetes/main.htm

Diabetes Control Center –
Information on good diabetes control
http://www.dr-diabetes.com/

Diabetes Dictionary –
Diabetes terminology
http://www.niddk.nih.gov/health/diabetes/pubs/dmdict/dmdict.htm

Diabetes Interview Magazine –
Current research in diabetes
http://www.diabetesinterview.com/

Glaucoma Research Foundation –
Eyesight Protection
http://www.glaucoma.org/

Juvenile Diabetes Research Foundation –
An organization devoted to diabetes cures & cares
http://www.glaucoma.org/

Lower Extremity Amputation (LEAP)
http://www.bphc.hrsa.dhhs.gov/leap/

Mt. Sinai Hospital Diabetes Program
http://www.mssm.edu/medicine/endocrinology/home-page.html

National Center for Chronic Disease Prevention and Health Promotion
http://www.cdc.gov/nccdphp/

National Diabetes Information Clearinghouse –
Patient education to statistical data
http://www.niddk.nih.gov/health/diabetes/ndic.htm

New York State Department of Health Diabetes Control Program
http://www.health.state.ny.us/nysdoh/consumer/diabetes/condiab.htm

SUNY Upstate Medical Center Diabetes Program
http://www.universityhospital.org/joslin/

The Joslin Diabetes Center –
An organization devoted to diabetes cures & cares
http://www.joslin.org/

National Diabetes Information Clearinghouse

This directory lists Government agencies, voluntary associations, and private organizations that provide diabetes information and resources. Some of these diabetes organizations offer educational materials and support to people while others primarily serve health care professionals.

Department of Health And Human Services

National Institutes of Health (NIH)

National Institute of Diabetes and Digestive and Kidney Disorders (NIDDK)

Home page: *http://www.niddk.nih.gov*

- Government's lead agency for diabetes research
- Funds six Diabetes Research and Training Centers
- Has the following three information clearinghouses:

National Diabetes Information Clearinghouse (NDIC)

1 Information Way
Bethseda, MD 20892-3560
Tel: (301) 654-3327
Fax: (301) 907-8906
E-mail: *ndic@info.niddk.nih.gov*
Home page: *http://www.niddk.gov*

National Kidney and Urologic Diseases Information Clearinghouse (NKUDIC)

3 Information Way
Betheseda, MD 20892-3580
Tel: (301) 654-4415
Fax: (301) 907-8906
E-mail: *nkudic@info.niddk.nih.gov*
Home page: *http://www.niddk.gov*

Weight-control Information Network (WIN)

1 WIN Way
Bethseda, MD 20892-3665
Tel: (800) WIN-8098 or (301) 984-7378
Fax: (301) 984-7196
E-mail: *win@info.niddk.nih.gov*
Home page: *http://www.niddk.gov*

Diabetes Research and Training Centers (DRTCs)

- offer educational seminars and workshops for health care professionals
- provide referrals to people with diabetes

For more information on publications and programs contact the centers listed below:

Albert Einstein DRTC

Judith Wylie-Rosett, Ed.D.,R.D.
Belfer Bldge. 1308
1300 Morris Park Ave.
Bronx, NY 10461
Tel: (718) 430-3345
Fax: (718) 430-8634
E-mail: *jwrosett@aecom.yu.edu*
Web page: *http://medicine.aecom.yu.edu/diabetes/DEC.htm*

Indiana University DRTC

David G. Marrero, Ph.D.
Indiana University School of Medicine
The National Institute for Fitness and Sport
Room 122
Indianapolis, IN 46202
Tel: (317) 278-0905
Fax: (317) 278-0911
E-mail: *dmarrero@mdep.iupy.edu*

Michigan DRTC

Roland H. Hiss, M.D.
G1103 Towsley Center, Box 0201
University of Michigan Medical School
Ann Arbor, MI 48109-0201
Tel: (313) 763-1426 or
(734) 763-5739 (secretary)
Fax: (313) 936-1641
E-mail: *mfunnell@medmail.umich.edu*

University of Chicago DRTC
Wylie L. McNabb, Ed.D
Center for Research in Medical Education and Health Care

University of Chicago Department of Medicine
5841 S. Maryland Avenue, MC 6091
Chicago, IL 60637
Tel: (773) 753-1310
Fax: (773) 753-1316

University of Illinois DRTC
Department of Pediatrics
College of Medicine
Peria, IL 61637
Tel: (309) 655-4242
Fax: (309) 655-2565

Washington University DRTC
Edwin B. Fisher, Jr., PhD *(medical research only)*
Washington University School of Medicine
Division of Health Behavior Research
4444 Forest Park Avenue, Suite 6700
St. Louis, MO 63108
Tel: (314) 286-1900
Fax: (314) 286-1919

National Eye Institute (NEI)
National Eye Health Education Program
Box 20/20
Bethseda, MD 20892
Tel: (800) 869-2020 *(for health professional only)*
or (301) 496-5248
Fax: (301) 402-1065
E-mail: *2020@b31.nei..nih.gov*
Home page: *http://www.nei.nih.gov*

National Heart, Lung, and Blood Institute (NHLBI) Information Center
P.O. Box 30105
Rockville, MD 2084-0105
Tel: (301) 592-8573
Fax: (301) 592-8563
E-mail: *nhlbiic @dgsys.com*
Home page: *http://www.nhlbi.nih.gov/health/infoctr/*

National Oral Health Information Clearinghouse (NOHIC)
1 NOHIC Way
Bethseda, MD 20892-3500
Tel: (301) 402-7364
Fax: (301) 907-8830
E-mail: nidr@aerie.com
Home page: http://www.nidr.nih.gov

Centers for Disease Control and Prevention (CDC)
Division of Diabetes Translation
National Center for Chronic Disease Prevention and Health Promotion
Mail Stop K-10
4770 Buford Highway NE
Atlanta, GA 30341-3717
Tel: (800) CDC-DIAB
Fax: (301) 562-1050
E-mail: *diabetes@cdc.gov*
Home page: *http://www.cdc.gov/diabetes*
Home page includes facts sheets, statistics, publications, and information about State diabetes control program

Indian Health Service (IHS)
Indian Health Service Headquarters
Diabetes Program
5300 Homestead Road NE
Albuquerque, NM 87110
Tel: (505) 248-4236
Fax: (505) 248-4188

Office of Minority Health Resource Center (OMH-RC)
P.O. Box 37337
Washington, DC 20013-7337
Tel: (800) 444-6472
Fax: (301) 589-0884

Department of Veterans Affairs

Veterans Health Administration (VHA)
Program Chief Diabetes
Veterans Health Affairs
810 Vermont Avenue NW
Washington, DC 20420
Tel: (202) 273-8490
Fax: (202) 273-9142

Professional and Voluntary Associations

American Association of Clinical Endocrinologists (AACE)
1000 Riverside Avenue, Suite 205
Jacksonville, FL 32304
Tel: (904) 353-7878
Fax: (904) 353-8185
Home page: *http://www.aace.com*

American Association of Diabetes Educators (AADE)
100 West Monroe, 4th floor
Chicago, IL 60603
Tel: (312) 424-2426
Fax: (312) 424-2427
Diabetes Educator Access Line:
(800) TEAMUP4 (800-832-6874)
Home page: *http://www.aadenet.org*

American Diabetes Association (ADA)
American Diabetes Association
National Service Center
1701 North Beauregard Street
Alexandria,VA 22311
Tel: (703) 549-1500 (National Service Center), also
(800) 232-3472 or (800) 342-2382 (800 DIABETES)
Fax: (703) 549-6995
Home page: *http://www.diabetes.org*

American Dietetic Association (ADA)
216 W. Jackson Boulevard, Suite 800
Chicago, IL 60606-6995
Tel: (312) 899-0040
Fax: (800) 877-1600
Home page: *http://www.eatright.org*

Diabetes Care and Education Dietetic Practice Group (DCE)
For more information contact the American Dietetic Association

National Center for Nutrition and Dietetics, Consumer Nutrition Hotline *(part of the American Dietetic Association)*
Tel: (800) 366-1655
Home page: *http://www.eatright.org*

American Foundation for Urological Disease Inc. (AFUD)
1128 N. Charles Street
Baltimore, MD 21201
Tel: (800) 242-2383 or (410) 468-1800

American Podiatric Medical Association (APMA)
9312 Old Georgetown Road
Bethseda, MD 20814-1698
Tel: (301) 571-9200
Fax: (301) 530-2752
E-mail: *askapma@apma.org*
Home page: *http://www.apma.org*
APMA Foot Care Information Center
Tel: (800) FOOT-CARE (800-366-8227)

Diabetes Action Research and Education Foundation
426 C Street, NE
Washington, DC 20002
Tel: (202) 333-4520
Fax: (212) 785-9595
Home page: *http://www.daref.org*

Endocrine Society
4350 East West Highway, Suite 500
Bethesda, MD 20814-4410
Tel: (301) 941-0200
Fax: (301) 941-0259
E-mail: *endostaff@endo-society.org*
Home page: *http://endo-society.org*

International Diabetes Federation (IDF)
Rue Defacqz 1
B-1000 Brussels, Belgium
Tel: 32-2/538-5511
Fax: 32-2/538-5114
E-mail: *idf@idf.org*
Home page: *http://www.idf.org*

International Diabetes Athletes Association (IDAA)
1647West Bethany Home Road #B
Phoenix, AZ 85015
Tel: (800) 898-4322 or (602) 433-2113
Fax: (602) 433-9331
E-mail: *idaa@getnet.com*
Home page: *http://www.diabetes-exercise.org*

Juvenile Diabetes Research Foundation International (JDRF)
120 Wall Street
New York, NY 10005
Tel: (800) 533-2873 or (212) 785-9500
Fax: (212) 785-9595
E-mail: *info@jdfcure.com*
Home page: *http://www.jdfcure.com*

National Certification Board for Diabetes Educators (NCBDE)
330 East Algonquin Road, Suite # 4
Arlington Heights, IL 60005
Tel: (847) 228-9795
Fax: (847) 228-8469

National Glycohemoglobin Standardization Program (NGSP)
Randie R. Little, Ph.D.
Network Coordinator
Department of Child Health, M772
University of Missouri
School of Medicine
1 Hospital Drive
Columbia, MO 65212
Tel: (573) 882-1257
Fax: (573) 884-4748
E-mail: *crandie@showme.missouri.edu*
Home page: *http://www.missouri.edi/~diabetes/ngsp.html*

National Kidney Foundation, Inc. (NKF)
30 East 33rd Street
New York, NY 10016
Tel: (800) 622-9010 or(212) 889-2210
Fax: (212) 689-9261 or (212) 779-0068

Pedorthic Footwear Association (PFA)
9861 Broken Land Parkway, Suite 255
Columbia, MD 21046-1151
Tel: (410) 381-7278 or (800) 973-8447
Fax: (410) 381- 1167

Private Organizations

International Diabetes Center (IDC) Institute for Research and Education Health System Minnesota
3800 Park Nicollet Boulevard
Minneapolis, MN 55416-2699
Tel: (612) 993-3393
Fax: (612) 993-1302
E-mail: *frueh@found.hsmnet.com*

Joslin Diabetes Center
One Joslin Place
Boston, MA 02215
Tel: (617) 732-2400
Home page: *http://www.joslin.harvard.edu*

Diabetes Control Program
Available Publications

Dear Health Professional:
Quantities of the publications listed on this sheet are available free of charge to New York State residents and organizations. To place an order, please circle the quantity desired and fill out the requestor information below. Forms may be faxed or mailed as specified below. Additionally, requests can be made via e-mail at the address below, if all information from the form is included.

Fax: 518-465-0432
Mail: NYS Dept. of Health, Distribution Center, 11 4th Ave., Rensselaer, NY 12144
E-mail: B0019W@albnydh2.health.state.ny.us

Requestor Information

Name: _____

Organization: _____

Address: _____

City, State, Zip Code: _____

Telephone Number: _____ Date: _____

Would you like a copy of our publication catalog? Yes _____ No _____

TITLE	TYPE	LANGUAGE	CODE NUMBER	CIRCLE QUANTITY
Diabetes: In Your Family, and Your Future	Booklet	English Spanish	0901 0902	50 100 150 50 100 150
Diabetes and Your Eyes	Pamphlet	English Spanish	0903 0905	200 200
Diabetes Health Card	Wallet Card	Spanish	0907	100
If You Are Black and Have Diabetes	Pamphlet	English	0908	50 100 150
Household Sharps: Dispose Of Them Safely	Flyer	English	0909	100
Level It Off! Control Your Blood Glucose (Blood Sugar) level	Booklet	English Spanish	0911 0912	100 50 100
Hello Neighbor (Hola Vecino)	Cookbook	English Spanish	0913 0914	1 25 50 1 25 50
Household Sharps: Dispose of Them Safely	Booklet	Spanish	0941	100
Diabetes Health Card	Wallet Card	English	0942	100
If You are Black and Have Diabetes	Pamphlet	Spanish	0943	50 100 150
Children with Diabetes, A Resource Guide for Families of Children with Diabetes	Book	English	0944	1 5 10 1 carton (38 books)
Children with Diabetes, A Resource Guide for Schools	Book	English	0945	1 5 10 1 carton (32 books)
Diabetes Foot Poster (for providers - remove shoes and socks)	Poster	English/reverse to Spanish	0946	1 5 10 25
Diabetes Surveillance in New York State - 2001	Book	English	0947	1 5 10 25

Revised 6-02

Publications

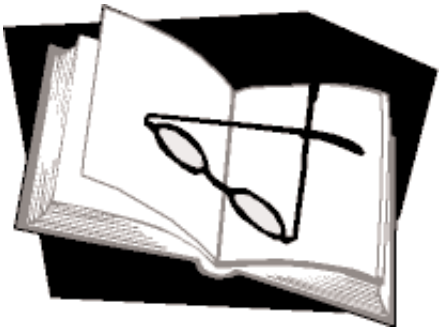
The ADA Guide to Healthy Restaurant Eating
Hope S. Warshaw, MMS, RD, CDE

The Diabetes Snack Munch Nibble Nosh Book
Ruth Glick

Diabetic Low-Fat & No-Fat Meals in Minutes!
M.J. Smith, R.D.

Everyone Likes to Eat: How Children Can Eat Most of the Foods They Enjoy and Still Take Care of Their Diabetes
Hugo J. Holleroth, Ed. and Debra Kaplan, R.D., M.S., with Anne Marie Bertollie, M.B.., R.D., C.D.E.

Exchange It: An Aid to Diet Control in Diabetes
Rita Clark, L.P.N.



The Kids, Food & Diabetes Family Cookbook
Gloria Loring

Month of Meals: Classic Cooking
Month of Meals: Meals in Minutes - Recipes for Diabetics
Billie Little

Baby-Sitters Club Truth About Stacey
Ann M. Martin

Baby-Sitters Club Stacey's Emergency
Ann M. Martin

Baby-Sitters Club Stacey McGill, Super Sitter
Ann Martin

Even Little Kids Get Diabetes
Connie White Pirner;
Illustrated by Nadine Bernard Wescott

In Control: A Guide For Teens With Diabetes
Jean Betschart, M.S.N., R.N., C.D.E. and Susan Thom, R.D., L.D.,C.D.E.

It's Time to Learn About Diabetes
Jean Betschart, M.S.N., R.N., C.D.E

A Magic Ride in Foozbah-Land: An Inside Look at Diabetes
Jean Betschart, M.N., R.N., C.D.E.;
Illustrated by Jackie Urbanovic

My Sister Rose Has Diabetes
Monica Driscoll Beatty;
Illustrated by Kathy Parkinson

Rufus Comes Home
Rufus, The Bear With Diabetes
Kim Gosselin

Sugar Was My Best Food: Diabetes and Me
Carol Antoinette Peacock, Adair Gregory and Kyle Carney Gregory; Illustrated by Mary Jones

Taking Diabetes To School
Kim Gosselin

Commonsense Guide to Weight Loss
Barbara Caleen Hansen, PhD. and Shauna Roberts, PhD.

Complete Weight Loss Workbook
Judith Wylie-Rosett, EdD, RD; Charles Swencionis, PhD; Arlene Caban, BS; Allison Friedler, BS; and Nicole Schaffer, MA

Diabetes: A Guide to Living Well (Updated and Revised Edition)
Gary Arsham, M.D., Ph.D. and Ernest Lowe

The Diabetes Sports & Exercise Book
Claudia Graham, June Bierman and Barbara Toohey

Managing Your Child's Diabetes
Robert W. Johnson,IV, Sale Johnson, Casey Johnson and Susan Kleinman

My Personal Health Diary-
Juvenile Diabetes Foundation

Parenting a Diabetic Child
Gloria Loring

Psyching Out Diabetes: A Positive Approach to Your Negative Emotions
Richard R. Rubin, June Bierman and Barbara Toohey

The Uncomplicated Guide to Diabetes Complications
Marvin Levin, MD and Michael Pfeifer, MD

When Diabetes Hits Home
Wendy Satin Rapaport, LCSW, PsyD

The Diabetes Advisor
American Diabetes Association,
P.O. Box 732, Mt. Morris, IL 61054-8312

Diabetes Forecast
American Diabetes Association,
P.O. Box 363, Mt. Morris, IL 61054-8303

Diabetes Interview
P.O. Box 469050, Escondido, CA 92046

Diabetes Self-Management
P.O. Box 51125, Boulder CO 80323-1125

Take Charge of Your Diabetes
Illinois Department of Human Services, Division of Community Health Prevention, Bureau of Family Nutrition, Illinois Diabetes Control Program,
535 West Jefferson Street, 3rd Floor, Springfield, IL 62702

Voice of the Diabetic
811 Cherry Street, Suite 309, Columbia, Missouri 65201

Notes